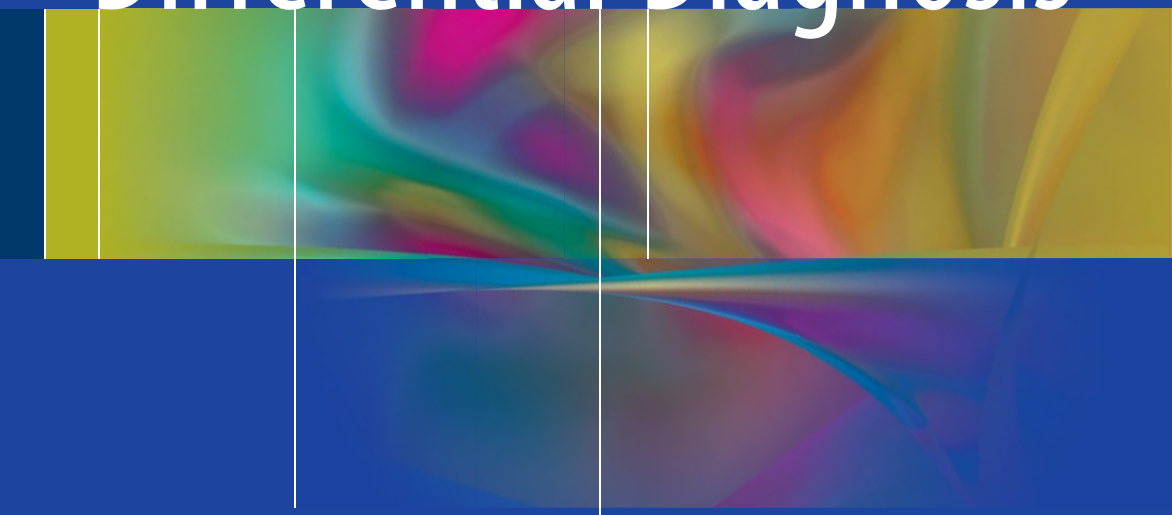
The Psychiatric Interview for Differential Diagnosis



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The Psychiatric Interview for Differential Diagnosis

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Foreword

This book fills a substantial gap in contemporary psychiatry and is written by two researchers and clinicians who have in-depth knowledge and scholarship in psychopathology. Psychiatry is currently in a state of profound crisis, from time to time acknowledged in major journals (Andreasen 2007; Kleinman 2012).

This crisis contains several independent components, first the diagnostic manuals have bred ever new categories and this proliferation has resulted in approximately 400 categories in the DSM and ICD systems. We have no etiological knowledge of the vast majority of these categories and we do not know much about their treatment. It is even doubtful if they all should be the matter of psychiatry (Ghaemi 2012). As it has been demonstrated by a Danish epidemiological study (Munk-Jorgensen et al. 2010), clinicians would be happy with approximately 20 categories. Choosing the most relevant diagnosis (differential diagnosis) between 400 categories is, of course, a matter for a computer and not for a human being.

The second component of the crisis is an increasing gap between a brilliant progress in basic neuroscience and its complete lack of consequences for clinical psychiatry (Hyman 2010). Clinical psychiatry is in a state of stagnation and new inventions and the treatment innovations come from people working on the ground and not from psychiatric academia.

The third component of importance and perhaps the root problem of psychiatry is the nature of the diagnostic system itself. In the preparations for DSM-III, the idea was to define its diagnostic categories by a prototypical narrative description supplemented by a list of selected symptoms that clinicians were obliged to complete. In the final production of DSM-III, the prototypes were abandoned and diagnoses defined by a sufficient number of symptoms from specific lists. It was naively believed that symptoms could be defined in a so-called operational way (Parnas and Bovet 2015). In these systems, the symptoms are considered as well-demarcated, mutually independent, thing-like objects, which can be unproblematically registered and quantified. The specific lists of symptoms for each diagnostic category were limited to a number of symptoms believed to be characteristic, as "gate keepers" to diagnosis. This entailed the disastrous consequence that the listed criteria came to be considered as the exhaustive description of the category in question, in other words, vast domains of psychiatry has gone into oblivion because psychiatric textbooks typically limit their psychopathological section to reprinting the DSM criteria.

The symptoms, which are shared by different disorders, were eliminated from the diagnostic systems in order to sharpen the boundaries of the categories. Thus, for example, it is often a novelty for a psychiatrist to hear that anxiety is a common feature of beginning schizophrenia.

These epistemological deformations of the object of psychiatry (symptoms and signs) have undoubtedly contributed to a lack of research progress and to a situation where the diagnostic process is basically reduced to an "associative event": when a patient presents with a complaint of being down, it is likely that he will be diagnosed with depression, and, if he says that he cuts himself, it is likely that he will receive the diagnosis of borderline. We also observe epidemics of certain mental disorders such as ADHD, autistic spectrum, etc., epidemics reflective of the problems of differential diagnosis in the operational systems (Parnas 2015).

A separate but closely related problem is that of interviewing the patient. We have empirically demonstrated that a fully structured interview is an absurdity (Nordgaard et al. 2012), and we have provided a detailed theoretical explanation in a separate paper (Nordgaard et al. 2013). The problem put very simple is that psychiatrists are not trained in conducting a psychiatric interview in a way that is phenomenologically correct, i.e., that allows the symptoms to emerge and articulate themselves in a quasi-natural conversation between the patient and the doctor. This volume describes certain basics of the psychiatric interview that have to be adopted in order to conduct an interview, which is maximally informative.

The symptom is not an isolated piece but typically depends on the context and larger wholes to which it belongs (Nordgaard et al. 2013). This book attempts to restore the basic knowledge of psychopathology and of the epistemic process involved in making psychiatric diagnoses. It provides a useful catalog of psychopathological descriptions based on a massive body of classic and modern psychopathological literature. It also restores a prototypical approach to diagnosis, explained very simple: when we see a patient we see him as a certain person in a specific context; if it is a 40-year-old male, still living with his mother, only leaving the apartment at night, and complains of "feeling down" it is unlikely that the cardinal problem is an affective disorder. These processes of typification and their relevance for diagnoses are explicated in detail in this book.

This volume is primarily addressing clinical psychiatrists and psychologists, psychiatric residents, and people involved in psychiatric research. It is also helpful to psychiatric nursing staff and other paramedical personnel involved in the treatment of psychiatric patients.

Copenhagen, Denmark Josef Parnas
2016

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Contents

1 Introduction 1
References 5

Part I The Diagnostic Interview

2 Validity and Reliability 9
2.1 The Concept of Validity 9
2.1.1 Validity of Allocating Psychiatric Diagnoses 11
2.2 The Concept of Reliability 13
2.2.1 Reliability of the Diagnostic Systems 14
References 15

3 The Psychiatric Interview: Theoretical Aspects 17
3.1 Typification 18
3.2 The Gestalt 19
3.3 Cartesian Dualism: The Inner and Outer 20
3.4 Experiences and Expressions: Consciousness 21
3.5 The Phenomenological Approach 23
References 24

4 The Psychiatric Interview: Methodological and Practical Aspects 27
4.1 The Fully Structured Interview 29
4.2 The Unstructured Interview 33
4.3 The Semi-structured Interview 34
4.4 Structured Versus Semi-structured Interview 36
4.5 Rapport and the Interviewer 40
4.6 How to Conduct the Psychodiagnostic Interview 42
4.7 Different Settings 45
4.8 Difficult Interviews 45
4.8.1 The Suspicious, Guarded Patient 45
4.8.2 The Withdrawn, Psychotic Patient 46
4.8.3 The Threatening, Aggressive Patient 46
4.8.4 The Severely Exalted Patient 47
4.8.5 The Suicidal Patient 48
References 49

5 Mental State Examination: Signs 53
5.1 Appearance and Behavior 55
5.2 Motor Function 58
5.2.1 Catatonia 61
5.2.2 Compulsions/Pseudocompulsions 66
5.2.3 Extrapyramidal Side Effects of Antipsychotic Medication 67
5.3 Eye Contact and Gaze 68
5.4 Rapport 69
5.5 Mood 71
5.6 Affects 73
5.7 Speech and Language 74
5.7.1 Formal Thought Disorders 76
5.8 Cognition 84
5.9 Self-Harm and Suicidal Behavior 85
References 88

Part II The Diagnostic Spectra

6 Navigating Between the Spectra: Organic Disorders, Schizophrenia, Affective Disorders, Personality Disorders, and Situational Problems 93
6.1 The Process of Differential Diagnosis 94
6.1.1 The Prototypical Approach 94
6.1.2 The Operational Approach 95
6.2 Diagnostic Spectra 95
6.3 The Specificity of Psychopathology 98
6.4 Existential Patterns 99
6.5 Diagnostic Overlaps and Comorbidity 101
6.6 The Borders of Normality 103
6.7 Diagnostic Slippage and Neglect 105
References 106

7 Considering Organic Pathology 109
7.1 General Aspects of Organic Psychopathology 110
7.2 The Psychiatric Expressivity of Organic Brain Disease 111
7.3 Organic States Hard to Recognize 112
7.4 Organic States Mimicking Functional Mental Illness 113
7.4.1 Organic (Secondary) Psychosis 113
7.4.2 Organic Paranoid and Schizophrenia-Like Psychosis 113
7.4.3 Organic Mood Disorders 116
7.4.4 Organic Anxiety and Obsessive-Compulsive Phenomena 117
7.4.5 Organic Personality Change 119
7.5 Mental Illness Mimicking Organic States 120
7.5.1 Pseudodementia 120
7.5.2 Pseudodelirium 122

7.5.3 Functional Neurological Disorders . . . 122
7.5.4 Factitious Disorder and Malingering . . . 123
Literature . . . 123

8 Indicators of Psychosis . . . 129
8.1 Psychosis . . . 130
8.2 The Diagnostic Criteria of Schizophrenia . . . 131
8.3 The Clinical Core Gestalt of Schizophrenia . . . 138
8.4 Near-Psychotic Phenomena . . . 141
8.5 Transition to Psychosis . . . 147
8.6 The Course and Clinical Variation of the Schizophrenia Spectrum Disorders . . . 149
8.7 The Problems of Early Detection of Schizophrenia . . . 154
8.8 Other Non-affective Psychoses . . . 156
8.9 The Differential Diagnosis of the Autism Spectrum . . . 157
8.10 Psychotic Phenomena in the General Population . . . 158
8.11 Disclaiming Psychopathology in Psychosis . . . 159
8.12 The Expressivity of the Schizophrenia Spectrum . . . 160
References . . . 163

9 Varieties of Depressive-Like Mental States . . . 169
9.1 The Diagnostic Criteria of Depression . . . 170
9.2 The Different Meanings of Depression . . . 174
9.2.1 Nuclear Depression . . . 175
9.2.2 Paradepression . . . 178
9.2.3 Pseudo-depression . . . 181
9.2.4 Depression in Schizophrenia . . . 181
9.2.5 Subclinical, Atypical, and Transcultural Depression . . . 182
9.2.6 Psychotic Depression . . . 183
9.3 The Course of Depression . . . 184
9.4 The Expressivity of Depression . . . 185
References . . . 186

10 Varieties of Anxiety . . . 191
10.1 Anxiety as Mood . . . 192
10.2 Panic Attacks . . . 194
10.3 Social Anxiety (Social Phobia) . . . 195
10.4 Obsessive-Compulsive Phenomena . . . 197
10.5 Hypochondriasis and Dysmorphophobia . . . 205
References . . . 206

11 Bipolar Disorder and Acute Psychosis . . . 209
11.1 Bipolar Disorder: Mania, Hypomania, and Mixed States . . . 210
11.1.1 Mania . . . 210
11.1.2 Hypomania . . . 213
11.1.3 Mixed States . . . 213
11.1.4 The Differential Diagnosis of Mania . . . 214

11.1.5 The Bipolar Spectrum 219
11.1.6 The Course of Bipolar Disorder. 220
11.2 Acute Non-organic Psychoses 221
11.3 Acute Schizophrenia and Schizoaffective Disorder. 223
11.4 Substance-Related Psychoses 226
References. 226

12 Detecting Disordered Personality Pattern 231
12.1 Personality Disorder. 232
12.2 The Recognition of Specific Personality Disorders. 233
12.3 Patterns of Personality Disorder 234
12.3.1 The Obsessive-Compulsive Style 235
12.3.2 The Paranoid Style. 236
12.3.3 The Hysterical Style. 237
12.4 Impulsive Personalities 237
12.5 The Differential Diagnosis Between Personality Disorder and Other Mental Illnesses. 243
12.6 Temperament as Premorbid Traits of Mental Illness. 244
References. 245

13 Thinking Adult in Adolescent Psychiatry 247
13.1 The Early Course of Schizophrenia. 248
13.2 Schizophrenia Versus Autism Spectrum Disorders 250
13.3 The Early Course of Affective Disorders. 251
13.4 Anxiety Disorders 252
13.5 Personality Disorder and Adolescence 252
13.6 Attention Deficit Hyperactivity Disorder. 253
13.7 The Effects of Substance Use/Abuse. 253
References. 254

14 Concluding Chapter: The Diagnostic Process 257

Index. 261

Introduction

1

What matters most are not the symptoms
but the mental state that conditions them
Minkowski quoting Binet and Simon

Making the correct diagnosis is a prerequisite for deciding the right treatment strategy. Without paraclinical aids, psychiatry is left to make its diagnoses by the diagnostic interview. The diagnostic manuals contain an increasing number of categories to choose among, which share a huge number of apparently nonspecific features, complicating the diagnostic process. These categories no longer purport to be nosological entities but merely syndromal "disorders" describing certain prominent features, a fact that explains why DSM encourages ample comorbidity diagnoses. In spite of the introduction of standardized and operationalized systems, misdiagnosis is rampant in clinical psychiatry and even in research.

The discipline of differentiating between similar diagnostic presentations is named *differential diagnosis*. There is no universally agreed upon definition of this. Merriam-Webster (http://www.merriam-webster.com) has "The distinguishing of a disease or condition from others presenting with similar signs and symptoms," and Encyclopædia Britannica (http://global.britannica.com) states that "The clinician uses the information gathered from the medical history and physical and mental examinations to develop a list of possible causes of the disorder, called the differential diagnosis." So, differential diagnosis has to do with choosing between a number of listed alternative conditions in the light of information gathered from different sources, the pivotal procedure in psychiatry being the diagnostic interview. This book deals with the psychiatric interview for the differential diagnosis.

Different approaches to differential diagnosis have been put forward over the years. In the days of prototypical diagnoses, differential diagnosis was informed by clinical observation of differences between diverse mental states (e.g., Weitbrecht 1966), and after the so-called operational revolution culminating with the DSM-III in 1980, it became a matter of diagnostic algorithm, e.g., in First (2014) who presents a step-by-step procedure starting from the chief complaints, ruling out medical conditions, etc., and following "decision trees" to find the condition, which can best account for the symptoms. An algorithm thus based on diagnostic criteria (of

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DSM-5, in this case) sets a limit to the refinement of the diagnosis. Confined to these criteria, it will inevitably ignore the psychopathological Gestalt informed by psychopathology and psychopathological context not incorporated in these criteria.

Very few psychopathological phenomena are specific for any condition; most are seen in a variety of disorders, e.g., anxiety, attentional deficits, and cutting, all reflecting that "something is not right." To determine the more basic disturbance of the phenomena requires some interviewing efforts to extract the salient profile of the presented distress. It is unlikely that a checklist, of say depressive or ADHD features, has an adequate potential to clarify the matter. There is no other way than talking with the patient and illuminating his experience in its context of other experiences, expressions, behaviors, and developmental historical aspects (Parnas 2012).

In our view, this book fills a gap in the psychiatric literature on the clinical interview for differential diagnosis. With this book, we wish to outline the basic principles of the diagnostic process and illustrate the diversity of psychopathological phenomena and clinical states beyond the descriptions delivered by the diagnostic systems, well aware that we are not writing textbook of psychiatry. Therefore, our treatment of diagnostic and psychopathological issues is by no means exhaustive but serves to emphasize aspects of special interest for differential diagnosis. Furthermore, it should be stressed that our diagnostic principles are exclusively based on clinical phenomena, not paraclinical procedures. Equally, we abstain from giving etiological explanations and dynamic accounts of the psychopathological processes, knowing that these always depend on a complex interaction of predisposing factors, environmental influences, subcultural and ethnic factors, psychological reactions, coping strategies, etc. (cf. Birnbaums model for psychosis 1974). Factors like these influence the case-specific variability and the meaningfulness of the psychopathological themes. But what matters most for the differential diagnosis is the basic structure of psychopathology; explanatory theories must be left to subsequent consideration and are beyond the scope of this book.

The first part of the book is devoted to the *psychiatric diagnostic interview*. The concepts of validity and reliability are discussed in Chap. 2. These basic methodological concepts were among the central arguments in discussions concerning nosological questions and the development of the polythetic diagnostic criteria, and as we will argue, these concepts entail certain difficulties.

Chapter 3 analyzes the diagnostic interview, which is analyzed at a theoretical level. We discuss the nature of symptoms and signs and the appropriate way of examining them. Additionally, we provide a description of prototypes and the notion of Gestalt and show that these are indispensable in the psychiatric diagnostic interview. Important aspects of the subject's experiences to uncover in the process are content, structure, and meaning relations to other experiences. Finally, we briefly outline the phenomenological approach to the psychiatric interview.

Chapter 4 deals with the methodological and practical aspects of the interview. We provide a thorough examination of the methodological approaches and the theories behind them and present a few empirical results. Further, we discuss the interviewer's behavior and the rapport. We argue that empathy, here understood as the

strong intention to comprehend the patient's experience and existence, should permeate the interview. Finally, we offer some basic tips for the good interview and illustrate some potentially difficult interviews.

Chapter 5 scrutinizes the importance of the appraisal of psychopathological expressivity. In this chapter, there is a description of a variety of expressive phenomena and their relevance for differential diagnosis. The main groups of expressive phenomena presented here are appearance and behavior; motor disturbances; catatonia; compulsions and pseudocompulsions; extrapyramidal side effects from antipsychotic medication; eye contact and gaze; rapport; mood; affect; speech and language, and among these, formal thought disorders; cognition; and self-harm and suicide. Aspects of the different expressive signs are illustrated in each section.

The second part of the book is dedicated to *the psychopathological structure of the diagnostic spectra*. In the first chapter, Chap. 6, we introduce the very notion of spectrum, a class of clinical conditions sharing the same basic structure in various forms and degrees of severity. We believe that what is valid in psychiatric nosology is the underlying psychopathological structure of these spectra (say the fundamental symptoms of the schizophrenia spectrum and the basic affective moods) rather than the actual formal criteria of the single diagnosis. Only after establishing the psychopathological affiliation to the spectrum in question, the specific diagnosis can be made using these criteria.

In each of the following Chaps. 7, 8, 9, 10, 11, 12, and 13, we examine critically the DSM-5 and ICD-10 diagnostic criteria for the principal diagnoses (in order to counteract simplified popular readings) and go through the fundamental psychopathological structures of the spectrum, the patterns of diachronic course, the variations in clinical presentation (including subclinical cases), the borders of the spectrum, and the differential diagnostic aspects of importance are summarized in comparative tables. The order of these chapters follows, more or less, the diagnostic hierarchy of ICD-10.

Chapter 7 on organic pathology first outlines the general characteristics of organic mental states. Though naturally not constituting a coherent diagnostic spectrum, these states do, however, share some common features. Section 7.4 lists a number of organic states mimicking functional mental illness and Sect. 7.5, the other way around, some mental illness mimicking organic states.

Chapter 8 deals with psychosis. Section 8.1 makes an attempt to define psychosis beyond the mere presence of "psychotic symptoms." Near-psychotic phenomena are described separately. Most of the chapter is about schizophrenia and the schizophrenia spectrum. That this is the most extensive chapter is motivated by the fact that schizophrenia spectrum psychopathology is complex and multifarious and that this spectrum is a major differential diagnostic area of hospital psychiatry. The basic psychopathological structure of the schizophrenia spectrum is constituted by autism and self-disorder.

Chapter 9 concerns depression and depressive-like states. Depression has become a broad class of mental states characterized by agonizing distress. Most patients in such a state of distress are at risk of being diagnosed with depression irrespective of their underlying psychopathology. This chapter aims at dissecting this broad class

into meaningful subcategories (core depression, reactive "paradepression," and pseudo-depression). Bipolar depression, a core depression, is treated here too, whereas mania, hypomania, and mixed states are relegated to Sect. 11.1 devoted to bipolar disorder. A specific quality of depressive mood is the essential structure of core depression.

Chapter 10 covers anxiety states, another broad diagnostic category not belonging to a single diagnostic spectrum. First we try to pin down the major aspects of anxiety, and then we focus on selected anxiety domains of importance for differential diagnosis, among these panic attacks, social anxiety, and obsessive-compulsive states. Social anxiety, in the broad sense, a heterogeneous class of anxiety states on its own, accompanies a whole range of different psychopathological conditions, and obsessive-compulsive-like features seem omnipresent, too. Hypochondria as an anxiety state has an important differential diagnosis of hypochondriac delusional disorder, treated in this chapter, too, for convenience sake.

Chapter 11 brings into focus bipolar disorder (except bipolar depression treated in Chap. 9) and other episodic nonorganic psychoses, including the acute psychoses. Mania often appears to be used as the designation of any acute psychosis with motor agitation regardless of the quality of other psychopathological phenomena, even in the absence of true manic mood. Therefore, we will focus on the basic structure of mania. The classification of acute non-affective psychoses differs according to historical traditions. This chapter aims at defining and delimiting these states.

Chapter 12 treats of personality disorders (PD), which are considered dimensional rather categorical diagnoses, also reflected in the cluster structure of ICD-5 PD. Cluster A PD are related to the schizophrenia spectrum. Special attention is devoted to borderline personality disorder, a widely used and misused diagnosis. Borderline PD seems often, erroneously, to be allotted to patients characterized by affective instability and self-harm, even in case of psychosis. We examine the differential diagnosis between personality disorder and other mental illness.

Chapter 13 touches upon aspects of adolescent psychiatry of significance for adult psychiatry: premorbid traits, the early development of mental illness, and diagnostic areas like the autism spectrum and ADHD.

In the *last* chapter (Chap. 14), the clinical interview for differential diagnosis is put into the context of a broad diagnostic examination also comprising observation, psychological testing, medical examination, and paraclinical tests, the full discussion of which is beyond the scope of this book. Throughout the book, we exemplify many points by clinical vignettes. We are convinced that the semi-structured, conversational, and phenomenologically informed approach is the proper way to meet, examine, and diagnose the psychiatric patient.

References in the empirical parts of the book were mainly selected according to their clinical relevance and the standard of psychopathology communicated. Thus, literature reflecting a qualitative, a descriptive, or a clinical, phenomenological-anthropological approach has been preferred to empirical studies using structured instruments. References to the diagnostic systems, not given in the next chapters, are as follows: ICD-8 (World Health Organization 1965), ICD-10 (World Health Organization 1992), DSM-II (American Psychiatric Association 1968), DSM-III

(American Psychiatric Association 1980), DSM-III-R (American Psychiatric Association 1987), DSM-IV (American Psychiatric Association 1994), DSM-IV-TR (American Psychiatric Association 2000), and DSM-5 (American Psychiatric Association 2013).

This book mainly targets clinical psychiatrists and psychologists engaged in diagnostics, but it also caters for researchers in need of refining their interviewing skills and psychopathological definitions. Furthermore, we think that this book may impart knowledge of psychopathology and differential diagnosis to psychiatry workers and students not themselves involved in diagnostics.

Apart from interviewing skills and knowledge of the principles of differential diagnosis, diagnostic skills also imply thorough theoretical and clinical knowledge of psychopathology from reading psychiatric literature (preferably including preoperational continental classics), solid clinical experience, and personal supervision and other kinds of feedback (e.g., obtained by attending formalized clinical interviews followed by peer discussions about the presented psychopathology). We will especially emphasize the rewarding practice of discussing live and video-recorded patient interviews among clinicians.

It is our hope that this book will encourage clinicians to take a renewed qualitative interest in psychopathology and diagnostics and that it will make a small contribution to changing the direction of clinical psychiatry from compulsively counting symptoms to sincerely listening to the patient.

The authors wish to *personally thank the following people* for their contributions in creating this book: Prof. Josef Parnas for his inspiration and constructive suggestions for the book, Prof. Louis Sass for his collaboration on the theory and methodology of the diagnostic interview, and the following persons for critically reviewing parts of the manuscript and for contributing many helpful suggestions: Psych. Birgitte Bechgaard, Dr. Lydia Damhave, Postdoc Mads Gram Henriksen, and Dr. Annick Urfer Parnas.

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Part I

The Diagnostic Interview

Validity and Reliability

2

Abstract

Validity and reliability are central methodological concepts in psychiatric nosology. However, the notion of validity raises considerable difficulties due to the nature of psychiatric disorders. In this chapter, we discuss the two concepts, their interrelation, and their shortcomings.

Good validity cannot be achieved without adequate reliability, but good reliability does not necessarily ensure validity. Improved reliability of the psychiatric diagnoses was paramount in the development of the operational diagnostic criteria, but in the attempt to achieve this goal, validity was sacrificed. Nonetheless, a striking improvement of the reliability of the clinical diagnoses after the introduction of the operational systems (DSM-III+ and ICD-10) remains to be seen.

In contemporary psychiatry, standardized, structured diagnostic interviews have become the "gold standard," especially in research but also increasingly in clinical work. In Chaps. 3 and 4, we will challenge this assumption, but before doing so, it is necessary to discuss some of the basic concepts involved when deciding between tests. In our case, the "test" is the psychiatric diagnostic interview.

2.1 The Concept of Validity

The concept of validity is ambiguous; a variety of concepts are used to describe different facets of validity (each with indistinct boundaries), and the concepts describing them are not always used consistently (Rush et al. 2005). The adjective "valid" is etymologically rooted in the Latin "validus" (literally meaning "strong" or "robust"), which is derived from "valere" (literally meaning "to be strong").

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Although it is generally accepted that the validity of diagnostic categories concerns the reality corresponding to each category, today there is no consensus about the explicit meaning of the concept of validity. Generally, the concept of validity is interwoven with a correspondence theory of truth, which is an epistemological position claiming that the truth or falsity of a belief is determined solely by whether or not it actually corresponds to that which it describes in the real world. Another theory of truth, perhaps more relevant for the current status of psychiatry, is the so-called coherence theory, which suggests that the truth or falsity of a belief is determined not by its correspondence to anything in the real world but only by its relation to other beliefs in the particular belief system, i.e., whether or not it coheres with these beliefs (Everitt and Fisher 1995). Both theories of truth entail, as any other epistemological position, a number of philosophical problems. A classical objection against the coherence theory is that it allows for a belief system being true, because all of its beliefs cohere, even though each of the singular belief is in fact false. In psychiatric research, psychopathological rating scales are usually validated against each other, and if they concur, it is concluded that they are valid (or "true"). This seems to be in accordance with the coherence theory. However, as already noted, such agreement of coherence does not necessarily reflect anything about the real nature of "what" is being rated. In other words, in spite of their coherence, they could potentially all be measuring something else than the intended.

According to Schaffner, the validity concept is clearest in deductive logic, where it refers to truth-preserving inference. In empirical science, the validity concept is, as elicited in the description above, typically associated with capturing the objective, external "reality" (Schaffner 2012).

Obviously, there are several concepts of validity. In the following, we will only sketch the more conventional concepts, namely, criterion, concurrent, predictive, content, and construct validity:

"Criterion validity" refers to whether the measure agrees with a gold standard. Criterion validity is the extent to which the measures are demonstrably related to concrete features in the "real" world. When a gold standard or other criterion of accuracy is available, a comparison with this standard is critical to assessing the measure's validity. Criterion validity is often divided into "concurrent validity" and "predictive validity," each of which has a specific purpose. "Concurrent validity" refers to the agreement among two or more different measures, which hypothetically measure the same thing. For example, one set of diagnostic criteria for schizophrenia could be statistically analyzed against another set of diagnostic criteria for schizophrenia; if there is a high correlation between the two sets of criteria, then the concurrent validity is high. "Predictive validity" of a test instrument or a measurement tool is established by demonstrating its ability to predict the results of an analysis of the same data provided by other test instruments or measurement tools. This compares the measure in question with an outcome assessed at a later time, for example, use of the grades from high school to predict grades in a future exam.

"Content validity" is a nonstatistical type of validity that involves a systematic examination of the test (or diagnostic category) content to determine whether it covers a representative sample of the behavior domain measured (e.g., does an IQ

questionnaire have items covering all areas of intelligence discussed in the scientific literature?). Content validity also involves the degree to which the content of the test matches the content domain associated with the construct (e.g., a test of the ability to add two numbers should include a range of combinations of digits). A test has content validity built into it by careful selection of which items to include.

"Construct validity" refers to the extent to which a test actually measures what the theory says it does (e.g., to what extent is an IQ questionnaire actually measuring intelligence?). Construct validity involves empirical and theoretical support for the interpretation of the construct (Anastasi and Urbina 2010).

It should be noted that various textbooks do not fully agree about these definitions, that the concepts to some extent overlap, and, moreover, that the distinction between these concepts is not clear.

Box 2.1 Different Kinds of Validity

Criterion validity	Do the measures agree with a gold standard?
(a) Concurrent validity	Do the measures' results agree with other measures that are hypothesized to measure the same phenomenon?
(b) Predictive validity	The measure's ability to predict the correct result
Content validity	Is the content representative for what it is being measured?
Construct validity	Does the test measure what it is constructed to measure?

When evaluating the validity of a diagnostic test, two important statistical measures are sensitivity and specificity. The sensitivity of a certain test indicates the percentage of those with the disorder who are correctly classified, and, consequently, a diagnostic test with high sensitivity has few false negatives. The specificity, on the other hand, indicates the percentage of those without the disorder who are correctly classified, and thus, a diagnostic test with high specificity has few false positives (American Psychiatric Association 2000). Obviously, an ideal diagnostic test scores 100 % in the domains of both sensitivity and specificity.

2.1.1 Validity of Allocating Psychiatric Diagnoses

Looking more specifically at the validity of allocating psychiatric diagnoses, Robins and Guze suggested an approach to facilitate the development of valid classification in psychiatry in 1970. Their approach became very influential and consisted of five phases: (1) clinical description, (2) laboratory studies (including psychological tests, radiology, and postmortem findings), (3) delimitation of the mental disorders (similar clinical features may be seen in patients suffering from different disorders, making exclusion criteria necessary), (4) follow-up studies to determine if there are marked differences in the patients' outcomes (instability of the patients' diagnoses

indicates that the category might not be valid), and (5) family studies (higher prevalence of the disorder among close relatives of the patient indicates a valid category). Obviously, the five phases interact with each other so that new findings in any one of the phases may lead to modifications in one or more of the other phases (Robins and Guze 1970).

The criteria of Robins and Guze have since been expanded by others, and some of the external validators currently considered pertinent for psychiatric disorders include family history, demographic correlates, biological and psychological tests, environmental risk factors, concurrent symptoms (that are not a part of the diagnostic criteria being assessed), treatment response, diagnostic stability, and course of illness (Kendler 1980, 1990). However, this approach also gives rise to some considerations: it is implicitly assumed that different external validators cohere (see coherence theory in Sect. 2.1), but there is no theoretical argument for why this necessarily should be the case. Just because course and outcome indicate that one set of criteria is superior to another set of criteria, it does not necessarily imply that biological or demographic validators will indicate something similar. In the situation of disagreement between validators, what validator is then the more valuable? Empirical methods alone cannot decide which validator should be given priority (Kendler 1990). Another implicit assumption is that psychiatric disorders are discrete entities, and the possibility that these disorders might merge into one another with no natural boundary in between was simply not considered (Kendell and Jablensky 2003). Consequently, a useful validating criterion must have both high sensitivity and high specificity. Kendler makes it tangible with the following description: "Although the criterion of familial aggregation probably has high sensitivity (all evidence shows that psychiatric disorders run in families), the specificity is low because many characteristics that run in families are not valid diagnostic entities, e.g., hair color, height and nose size" (Kendler 2006).

Different diagnostic criteria do not necessarily point in the same direction, as illustrated in the study of Jansson et al. Comparing ICD-10 with ICD-9 diagnoses they showed that out of a first-admission sample of 155 patients suspected of a schizophrenia spectrum disorder, 89 received an ICD-9 schizophrenia diagnosis, whereas only 35 patients from the same sample received an ICD-10 diagnosis of schizophrenia. The ICD-10 patients with schizophrenia tended to be more frequently male, and the first psychiatric symptoms appeared earlier in life among ICD-9 patients with schizophrenia. The ICD-9 schizophrenia status was associated with nearly fourfold and statistically significant risk for having a positive family history of schizophrenia (Jansson et al. 2002).

The validity criterion of outcome has proven less useful, as it has been demonstrated that some patients with schizophrenia recover completely and some bipolar patients have a chronic and disabling course. Psychopharmacological treatments also contribute to blur the picture resulting in massive "grey areas" of outcomes (Jablensky 2012).

There is probably no simple measure of the validity of a diagnostic concept. The types of validity often mentioned in the context of psychiatric diagnoses (i.e.,

construct, concurrent, content, and predictive) are all borrowed from psychometric theory in psychology. However, only a few diagnostic concepts in psychiatry meet these criteria at the level of stringency normally required of psychological tests (ibid.).

The idea in the diagnostic classification is to form categories for ordering and naming the disorders. In biology, the classifications reflect fundamental properties of biological systems and constitute "natural" classifications. The position in psychiatric classification is quite different from that as the objects being classified in psychiatry are not "natural" entities, but rather explanatory constructs (Jablensky 2012). A 'natural kind' is a family of entities possessing properties bound together by natural law (e.g. minerals, plants or animals). This is in contrast to entities lumped together by humans.

Believing that psychiatry will reach the same etiopathogenic validity that can be seen in somatic medicine seems naïve given that the etiology of most psychiatric disorders is multifactorial, meaning that the development of mental disorders is influenced by many different psychopathological processes (Kendler and Parnas 2012). Further, a variety of etiological factors may produce the same syndrome, implying that the relation between etiology and clinical syndrome is indirect (Birnbaum 1974).

Frequently used phrases, such as a specific psychiatric scale "is well validated", often refer to concurrent validity. But, in many cases, this is actually an overestimation of the concurrent validity given that it is not known, e.g., what schizophrenia really is or who the "true" schizophrenics are (Andreasen 2007). Inevitably, this weakens the explanatory power of this concept.

2.2 The Concept of Reliability

Reliability is another important issue in the methodology of the psychiatric diagnostic interview. Reliability refers to consistency and repeatability (Rush et al. 2005), i.e., to what extent does a diagnostic test produce the same results? Is it stable over time and among different raters? Good validity is not achieved without good reliability. However, reliability can be excellent even though the validity is poor.

Reliability is often tested statistically by Cohen's kappa. However, there is no consensus about the interpretation of kappa. We have seen changing or different interpretations of the kappa values, e.g., Spitzer and Fleiss (1974) interpreted kappa below 0.70 as unacceptable (Spitzer and Fleiss 1974), Landis and Koch (1977) considered kappas above 0.75 as being excellent (Landis and Koch 1977), and Clarke and colleagues found kappas above 0.4 as good to excellent (Clarke et al. 2013).

The relation between validity and reliability is often a trade-off. Generally, a diagnostic criterion will be more reliable if it is explicit and if minimal inference is required to assess its presence. However, restricting the criteria to those that can be measured with low inference may endanger the validity. How to balance the importance of reliability versus validity in assessing the value of diagnostic criteria?

Box 2.2 Examples of Interpretations of Kappa

Authors	Interpretation of kappa
Spitzer and Fleiss (1974)	$\kappa<0.70$ as unacceptable
Landis and Koch (1977)	$\kappa>0.75$ as excellent
Clarke, Narrow et al. (2013)	$\kappa>0.40$ as good to excellent

Kendler (1990) argues: "that just as empirical methods alone cannot determine which of several validators should be given priority in the evaluation of a psychiatric disorder, the emphasis placed on reliability versus validity is also fundamentally a value judgment."

This trade-off is apparent in the operational diagnostic criteria. The creation of the operational diagnostic criteria from the outset was motivated by the need to improve diagnostic reliability: the ideal goal was, of course, maximal reliability. Validity was obviously also considered important, but it was much less emphasized. This neo-Kraepelinian approach was heavily influenced by Robins and Guze's five phases. It was clearly stated by Andreasen: "Validity has been sacrificed to achieve reliability. DSM has given researchers a common nomenclature but probably a wrong one" (Andreasen 2007).

2.2.1 Reliability of the Diagnostic Systems

DSM-IV (APA 1994) and ICD-10 (WHO 1992) have been used since the 1990s, and good reliability has been shown in research settings (Modestin et al. 2003; Ventura et al. 1998). But unfortunately, a striking improvement in the reliability and validity of clinicians' diagnoses remains to be seen. For example, a Danish study of the clinical use of the ICD-10 "schizo-affective diagnosis" at two psychiatric university departments in Copenhagen found that out of 59 patients discharged with this diagnosis, only 6 of the patients actually fulfilled the diagnostic criteria, whereas the remaining 53 patients should have been diagnosed either with schizophrenia or with affective disorder (Vollmer-Larsen et al. 2006). Additionally, a Dutch survey of four mental health centers showed that among patients who reported a psychotic symptom at the referral, 56% received a DSM-IV nonpsychosis diagnosis or no diagnosis at all (Boonstra et al. 2008). Moreover, the diagnostic habits at seven psychiatric departments around Copenhagen have been shown to differ considerably across various psychiatric disorders, i.e., the percentage of patients with a discharge diagnosis of schizotypal disorder varied from 0.3% in one department to 12.4% in another department during the period of 1998–2000 (Handest 2003; Vollmer-Larsen 2009). Overall, the studies suggest not only that diagnostic reliability still is in need of improvement (even after the operationalization of the

classificatory systems, which then, to some extent, have failed in achieving one of its primary goals) but also, and more importantly, the studies indicate that factors other than specific criterial features influence diagnostic reliability (e.g., departmental diagnostic habits, clinical training, etc.).

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The Psychiatric Interview: Theoretical Aspects

3

Abstract

Seeking an adequate approach to the psychiatric diagnostic interview, it is essential to examine the character of the object in question, viz., the "psychiatric object." In this chapter, we examine the theoretical aspects—what kind of phenomena are symptoms and signs? And how does the psychiatrist arrive at a diagnosis? The symptoms and signs are interdependent and mutually implicative and form certain meaningful wholes based on the patient's biography. They are interpenetrated by experiences, feelings, expressions, beliefs, and actions. A symptom is not an independent, thinglike entity that can be evaluated in isolation from the patient and context. Content, structure, and meaning relations to other experiences are all aspects of importance for "a psychic event" to become a specific symptom. Confronted with the patient, the psychiatrist perceives the patient in a certain way—resembling a certain prototype. This typification will be modulated and perhaps altered during interaction with the patient. Based on the analyses in this chapter, we conclude that the assessment of psychopathology requires an in-depth study of experience and subjectivity.

In this chapter, we discuss some of the theoretical underpinnings of the psychiatric interview and approach the most adequate and coherent way to elicit psychopathological information, i.e., to conduct the psychiatric, diagnostic interview. We seek to answer some basic questions, among these: What is an adequate framework to understand psychiatric symptoms and signs? What kind of entities are symptoms and signs (what Berrios calls the "psychiatric object" (Berrios 2002; Markova and

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Berrios 2009)? And how do we decide when an experience becomes a symptom? Interviews with a high degree of structure (e.g., the Structured Clinical Interview for DSM) (SCID; First et al. 2007) have become the gold standard of diagnostic interviewing in psychiatry, primarily in research but also, increasingly, in everyday clinical work. But do the structured interview schedules represent a proper way to examine the psychiatric object?

3.1 Typification

The perception of an object is always comprehended on the basis of one's previous knowledge and experience, i.e., typification of the perception. Typification is not limited to perceptions but is a very basic human cognitive feature in which we structure and organize our experiences as salient units or certain Gestalts. In this sense, one might say, seeing is always "seeing as…" (Hanson 1965; Mullhall 1990; Wittgenstein 1953); it is always perspectival or aspectual. Involved in typification are pattern recognition and pattern completion making it possible to grasp objects and situations under conditions of limited or incomplete information. Typification is a largely automatic process that pervades all of our experiences and occurs outside explicit awareness. The typification is embedded in the perception itself—it is not an interpretation on top of the perceptual act. To give an example: we do not recognize a face as friendly based on logical inference from perceptions of individual muscular contractions on the other person's face; we see it directly "as friendly" (Nordgaard et al. 2013).

Both theoretical analyses of categorization (e.g., Rosch 1973; Rosch and Mervis 1975), and empirical studies of the diagnostic process itself (Kendell 1975), reach the conclusion that in a natural conversational clinical situation, the information provided by the patient coupled with his behavior, experience, and psychosocial history leads to the first typifications, i.e., to the interviewer's *seeing the patient as resembling a certain prototype*. We are here referring to the actual, real-world process of deciding upon a psychiatric diagnosis (ibid.).

A prototype is a central example of a category in question; a sparrow is a more typical bird than a penguin or an ostrich (Parnas 2012). In learning to recognize a certain prototype, it is important to be exposed to other categories that resemble, but do not belong to, the category in question (e.g., bike and moped).

Early in the interview, the psychiatrist's typifications of the patient will start to evolve and he will sense the patient as being *a certain way*, e.g., as withdrawn, hostile, sympathetic, guarded, or eccentric. Throughout the interview, these initial typifications will become more specific and nuanced, modified by further interactions with the patient (Schwartz and Wiggins 1987a). The typifications may be replaced, but there is always a certain typification that functions as a formative matrix upon which specific features and responses are assessed (Nordgaard et al. 2013).

Obviously, there are potential dangers in typifications: First, the psychiatrist can be blinded by her expectations and therefore may fail to recognize subsequent data for what they really mean. Second, the repertoire of typifications that any

psychiatrist has acquired through past experience could always contain various misperceptions and misconstruals. Third, typifications could be misused as stereotypes if the clinical investigation does not advance toward a gradually more individualized understanding of the patient. Psychiatric training must include and encourage prototypes—otherwise, the clinician will meet the patient and the chaotic wealth of unconnected data she is presenting unprepared and powerless; how is he then to structure and understand the information? The clinician, who has not been taught the psychiatric prototypes in a systematic way, is left to acquire his own private prototypes. Examples of private prototypes are the young female patient who cuts herself being seen as a case of borderline personality disorder or the patient who complains of difficulties in concentrating and attention being seen as suffering for ADHD (Parnas 2012). Training in psychiatric prototypes in a way that allow disciplined, critical, and peer-shared reflections should be an indispensible part of the psychiatric training.

Typification is, however, a fundamental and indispensable constituent of the diagnostic process (Schwartz and Wiggins 1987a, b) and a way to convey structure and meaning to mental states by revealing the ideally typical connections instead of a disjointed enumeration of them (Jaspers 1913, 1959/1963). The scientific use of typifications requires that psychiatrists also doubt and reflect on their typifications and repeatedly test their own interpretations by seeking additional components to prove their typification or maybe even more important: to call it into question. Typifications are scientific only to the extent that they are based upon and tested by evidence, given through direct observation and communication with the patient. The value lies in orienting and structuring the first steps in psychiatric investigations (Schwartz and Wiggins 1987a).

The process of typification is eliminated or severely constrained in a fully structured interview, in which both the relevant expressive signs and subjective symptoms are selected before the interview is even conducted. This selection occurred when the structured interview in question was constructed in the sense that symptoms and signs are assumed to be predefined as well-demarcated, mutually independent entities.

3.2 The Gestalt

The psychiatric object consists of symptoms and signs. Obviously, the term "symptom" refers to the patient's subjective complaints, whereas "sign" refers to third-person phenomena that are "externally" observable. This distinction is mainly unproblematic in somatic illness, where symptoms and signs share their ontological, thinglike, nature, ideally pointing to their somatic causes (see Sect. 3.4). By contrast, the vast majority of psychiatric *signs* are *expressive*, linked to emotion, mood, interpersonal rapport, bodily movement, language, and discourse—all of which involve a subjective component (Nordgaard et al. 2013).

A separation between the expression and the expressed content is only artificially possible, e.g., the sign of tearful eyes from the symptom of sadness. A radical

separation of symptoms and signs is an epistemological impossibility because the patient manifests himself through certain meaningful wholes, typically emerging from certain conjunctions of the outer and the inner (ibid.).

The wholeness of a clinical picture can be described by the concept of the Gestalt. This is a salient *unity* or organization of phenomenal aspects that cannot be reduced to a simple aggregate; the "whole is more than the sum of its parts." This unity emerges from the relations between component features and is influenced by the whole (part-part-whole relations). A Gestalt may have *aspects*, of course, and these may be focused on in diagnosis or research, but the aspects are interdependent in a mutually constitutive and implicative manner. The salience of the interviewed patient is jointly constituted by the patient's experience, belief, and expression. The content of what the patient says is always molded by the form (how) of thinking, experiencing, and expressions. Further, a Gestalt is a concrete example of general type (e.g., this patient is typical of a category X), but this typicality is always modified, because it is necessarily embodied in a particular, concrete individual, thus deforming the ideal clarity and universality of the type (Merleau-Ponty 1963). We always perceive an expression (sign) in the context of its temporal unfolding and in conjunction with the expressed contents (symptoms), and vice versa. This issue has been clarified in a classic article by anthropologist Geertz (1973) who (borrowing from the philosopher Gilbert Ryle) describes the crucial difference between perceiving what may be the very same physical movement as a wink versus as a mere blink, depending on context and ascribed expression or intent (Nordgaard et al. 2013).

Thinking that the task of understanding the world requires only the discernment of identical elements across different individuals in addition to measurements of the quantity on specified dimensions would be a mistake. It is crucial, as well, to be concerned with forms of pattern recognition that involve *qualitative similarities*, whether of entire Gestalts or of aspects thereof. Insistence on holism and Gestalt qualities is not antiscientific: it is possible both to compare Gestalts and to investigate their interdependent aspects in ways that allow for scientific generalizations. An illustrative example of the application of Gestalt analysis to psychiatry is the seminal work of Klaus Conrad on the beginning of schizophrenia (the onset of schizophrenia) (Broome et al. 2012; Conrad 2006; Nordgaard et al. 2013).

3.3 Cartesian Dualism: The Inner and Outer

The prevalent view of the psyche as a mere assemblage of the inner and the outer is reliant on the Cartesian dualisms of mind versus world and mind versus body that are now almost universally rejected in philosophy of mind and action. Contemporary philosophers of mind certainly recognize the experiential *asymmetry* between the first- and the third-person perspectives (Nagel 1986); however, they also point to the public or intersubjective dimensions of experience, perhaps most clearly manifest in emotion. In the case of emotions, the lived or subjective aspects cannot be separated either from the context in which they occur or from the associated bodily states,

tendencies, and forms of expression with which they are associated—as both Wittgenstein and Merleau-Ponty have emphasized. "I could not imagine the malice and cruelty which I discern in my opponent's looks separated from his gestures, speech and body," writes Merleau-Ponty. "None of this takes place in some other-worldly realm, in some shrine located beyond the body of the angry man (…) anger inhabits him and blossoms on the surface of his pale or purple cheeks, his blood-shot eyes…" (Merleau-Ponty 2008; Nordgaard et al. 2013).

3.4 Experiences and Expressions: Consciousness

Today Psychopathological phenomena are typically considered in isolation as they were independent of other psychic phenomena, and the only point of reference is the corresponding, undisturbed psychic phenomena (Sigmund 2004).

The psychiatric symptoms and signs are not something close to third-person data, i.e., not public accessible and mutually independent entities. In somatic medicine, symptoms and signs have no intrinsic meaning, and they merely guide us toward the underlying physiological substrates, e.g., jaundice pointing to the liver and coughing to the lungs. With a very few exceptions, we do not know the etiopathological causes in any diagnostically relevant sense in psychiatry. In contrast with somatic medicine, the psychiatric symptoms and signs are not devoid of subtle or complex forms of meaning and suitable for context-independent definition and measurement. Thus, a psychiatrist finds herself in a quite different situation than the somatic physician (Jaspers 1959/1963; Spitzer 1988). The psychiatrist is not confronting an organ or body part but another *person*, i.e., another embodied consciousness with its realm of meaning. Patients do not manifest a series of independent symptoms or signs, but rather, their symptoms and signs are interdependent and mutually implicative, forming certain meaningful wholes that are interpenetrated by experiences, feelings, expressions, beliefs, and actions, all permeated by biographical detail. These aspects and these wholes are not constituted by a reference to underlying substrate but by their meaning (Nordgaard et al. 2013; Henriksen and Nordgaard 2016).

Here, we understand consciousness (mentality; subjectivity) as the phenomenal manifestation of thoughts, feelings, and perceptions, i.e., broadly speaking, experiences. Consciousness is a presence to itself and the world, as an inseparable dimension of our existence or life: Jaspers described "psyche" as "not (…) an object with given qualities but as 'being in one's own world', the integrating of an inner and outer world" (Jaspers 1959/1963, p. 9, our italics). We apprehend the patient's consciousness, his inner world, through and in his expressions and communications (Jaspers 1959/1963, p. 20) (ibid.).

Consciousness manifests itself as a becoming (Dainton 2008; Siewert 1998; Strawson 2007; Parnas et al. 2005; Jaspers 1959/1963), a temporal flowing, and a "streaming" of intertwined experiences (including thoughts). This streaming is not amorphous but is organized into a *field of consciousness* that exhibits a certain structure, involving temporality, intentionality, embodiment, and self-awareness. In other

words, consciousness does not consist of sharply separable, *substantial*, or thinglike components, exerting mechanical causality on each other. "Rather," writes the phenomenologist Husserl, "it is…a … network of interdependent *moments* (i.e. non-independent parts)…founded on intentional *intertwining*, *motivation*, and mutual *implication*, in a way that has no analogue in the physical" (Husserl 1959 37). This peculiar nature of consciousness led Jaspers to deny any strict analogy between psychopathological description and the description in somatic medicine (Jaspers 1959/1963; Nordgaard et al. 2013).

A symptom is not pregiven as an autonomous, thinglike entity that would render it possible to examine and describe them as a vase or a bowl. But what, then, defines an experience as a specific symptom? On the phenomenological account, the symptom is *individuated* (becomes *this* or *that* symptom) along several dimensions, including not only its content but also its structure (form) and its meaning relations to previous, simultaneous, and succeeding experiences. Often, the symptom does not exist as a fully articulated "mental object" directly accessible to introspection or a preformed question but rather as a pre-reflective, implicit content or as an altered framework/structure of consciousness. Frequently, it requires recollection. And in all these instances, articulation or individuation of a symptom requires a reflective, conceptualizing process that can be difficult to achieve (ibid.).

To illustrate the issue of symptom determination as a meaningful whole inserted in a web of relations to other contents and forms of consciousness, Nordgaard et al. 2013 provide two examples:

1. A smile cannot in itself be predefined as silly. The silliness of a smile only emerges within the context of the flow of expressions relative to a particular discourse. The same applies to the bizarreness of a delusion (Cermolacce et al. 2010) or to defining features of overvalued ideation or magical thinking.
2. Consider the symptom of "audible thoughts" at the prepsychotic and psychotic phases of schizophrenia. The phenomenon of audible thoughts is not defined by its presumed acoustic loudness or pitch. It should be suspected rather when there is a structural change in the field of awareness, namely, a disintegration of the unity of inner speech-thinking into its components of *meaning* (content) and *expression* (signifier; sign). The patient seems to *listen to* or *attend to his* "*spoken*" *thoughts* (or to thoughts expressed in writing or other visual form) in order to grasp *what* he is thinking. Normally, of course, we simply *know* what we think while thinking, without any help from signs and without any temporal or experiential gap between the subject and his thought (Durand 1909; Leuret 1834/2007; Nordgaard et al. 2013).

Karl Jaspers offers a very comprehensive analysis of psychiatry's theoretical foundations in successive editions from 1913 to 1954. Despite an English translation in 1963, the text had limited impact on psychiatric practice and research in the Anglophone world. Many of our key points are anticipated in Jaspers' book (Jaspers 1959/1963). Jaspers himself based many of his insights from the emerging science of the humanities (Dilthey 2010; Weber 1949). His vision of psychopathology

placed a decisive emphasis on phenomenology, in the sense of a systematic exploration of the patient's subjective experience and point of view. The object of psychopathology was the "conscious psychic event," and psychopathology consequently requires an in-depth study of experience and subjectivity (Nordgaard et al. 2013).

3.5 The Phenomenological Approach

The term *phenomenology* is polysemic in psychiatry. It has been used in at least three different ways. First, in mainstream psychiatry, "phenomenology" simply refers to the description of symptoms and signs. This meaning relies on a behavioristic view of how things seem to appear. Second, Karl Jaspers' use of phenomenology signifies the study of subjective experience and implies an empathic understanding of the patient's mental life. The psychiatrist must faithfully try to recreate the patient's experiences and, in doing so, the interviewer relies on empathy. It includes perceptual, cognitive, and emotional experiences. Third, phenomenology denotes a specific philosophical approach, aimed at unravelling the essential structures of human experience and existence. This approach has its clinical counterpart in phenomenological psychopathology, which strives to lay bare the altered structures of abnormal experience. Here, we use the term "phenomenology" in the later, philosophical sense.

A detailed account of the philosophical-phenomenological approach would be too excessive and beyond the scope for this book. However, we will briefly sketch a few basic ideas. Phenomenology strives to be an unprejudiced descriptive study of whatever may appear in our conscious life. Its origin can be sought at the end of the nineteenth century in the school of Franz Brentano. Phenomenology was inaugurated by Edmund Husserl and further developed by his successors, and it has become a major tradition in philosophy (Moran and Mooney 2002). Phenomenology is particularly interested in topics such as consciousness, self-awareness, intentionality, embodiment, and intersubjectivity. "The phenomenological approach is primarily descriptive, seeking to illuminate issues in a radical, unprejudiced way, paying close attention to the evidence that presents itself to our grasp or intuition" (Moran and Mooney 2002) (p. 1).

For our purpose, three Husserlian concepts merit attention, namely, the "natural attitude," the "epoché," and "eidetic variation." The "natural attitude" refers to the default, common-sense view of the world we all share; it is "a horizon of being" (Broome et al. 2012 p. 14), and naturally, this worldview entails a whole range of implicit assumptions (the most basic of which is that of the existence of external reality). A guiding motif in Husserl's phenomenology is that in order to faithfully explore the appearance of any object of inquiry, we must initially suspend all taken-for-granted assumptions or available knowledge related to these very objects. This is exactly the function of the method of "epoché." By effectuating the "epoché," we do not deny the validity of these assumptions or our preestablished knowledge. Rather, we, so to say, put their validity into brackets, thereby ideally allowing an unprejudiced study of how these objects appear to us. "The phenomenological

epoché entails abstaining from all judgments that rely upon the general positing of the world" (Russel 2006 p.66). Leaving many details aside, the function of "eidetic variation" is now to try and strip the appearing object of its arbitrary features and thereby grasp its essential or invariant features, which constitute or define the object as this particular type of object (Parnas and Zahavi 2002, p.157). For example, if we are interested in grasping the essence of a sphere, the color and size of any factually occurring sphere in the world are arbitrary features, whereas the fact that the distance from the sphere's center to any point on its surface is always the same is an essential, defining feature of the sphere.

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The Psychiatric Interview: Methodological and Practical Aspects

4

Abstract

Becoming a skilled psychiatric diagnostic interviewer requires years of effort. The study of the basic science of psychopathology and clinical training are essentials. The interview can be conducted with different degrees of structure: fully structured, free style (fully unstructured), and semi-structured. We examine each methodological approach and the theories behind them, and we present results from empirical studies. We argue that the standardized, fully structured psychopathological diagnostic interview does not seem to be an epistemologically adequate or valid way of allocating psychiatric diagnoses. We recommend that a semi-structured, conversational, and phenomenologically oriented interview should be used for eliciting psychodiagnostic information. Further, we recommend that empathy, here understood as the strong intention to comprehend the patient's experiences and experiential framework, must permeate the entire interview.

We provide practical suggestions useful in the interview and give examples of situations in which the patient's psychopathology complicates the interview and offer advice on how to take this into account when interviewing.

Based on the theoretical analyses of the psychiatric interview in Chap. 3, we will here discuss the methodological approaches for conducting the psychiatric diagnostic interview at a more practical level to determine the appropriate approach. The first part of the chapter will provide definitions and descriptions of the different

This chapter draws upon the papers:
Nordgaard J, Revsbech R, Saebye D, Parnas J (2012) Assessing the diagnostic validity of a structured psychiatric interview in a first-admission hospital sample. *World psychiatry: official journal of the World Psychiatric Association* 11 (3):181–185
Nordgaard J, Sass LA, Parnas J (2013) The psychiatric interview: validity, structure, and subjectivity. *European archives of psychiatry and clinical neuroscience* 263 (4):353–364. doi:10.1007/s00406-012-0366-z

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L. Jansson, J. Nordgaard, *The Psychiatric Interview for Differential Diagnosis*,
DOI 10.1007/978-3-319-33249-9_4

degrees of structure by which the interview can be performed. Next, we will discuss the rapport; the quality of the rapport established with the patient is probably the most decisive factor determining the quality of the data collected during the interview. We will argue that the semi-structured approach is the most adequate and provide suggestions for the practical conduct of the psychiatric diagnostic interview. Finally, we discuss some interviews that can be challenging. Throughout the chapter, we will illustrate some of our points by patient examples.

We obtain information about our patients primarily by talking with them and observing their behavior and gain additional insight from their relatives. Thus, the psychiatric interview occupies a central position in psychiatry. It takes years to become a skilled interviewer. Studying the basic science of psychopathology in close interaction with clinical training is mandatory. One must watch skilled clinicians interview patients, observe and discuss interviews conducted by other interviewers, and have skilled teachers to supervise one's own interviews. Finally, becoming skilled takes a lot of practice and experience. It can be very helpful to film one's own interviews from time to time, as most of us occasionally disregard our own intentions of the interview process.

The goal of a psychiatric assessment is to describe the patient's complaints and appearance (i.e., in a sense the patient's existence) in an actionable psychopathological format, namely, one that allows diagnostic classification and other clinical decisions. This process includes, to a large degree, describing the patient's experiences, originally lived in the first-person perspective, in potentially third-person terms, thus providing shared "objective" data for diagnosis, treatment, and research (Nordgaard et al. 2013).

Allocating psychiatric diagnoses is a very complex issue that cannot be reduced to a question of reliability. A symptom can always be seen from different perspectives, although one of these perspectives often becomes the focus of the study. The same symptom seen from different points of view can give rise to quite different descriptions and theories. The initial way we experience a phenomenon can determine all our subsequent dealings with it. Jaspers wrote about grasping complex unities (e.g., a person's being): "…In grasping particulars we make a mistake if we forget the comprehensive whole in which and through which they exist" (Jaspers 1959/1963 p. 25).

Terms used to describe mental conditions are highly polysemic, e.g., the word "depression," which for people without psychiatric training often means "feeling in a poor mental condition" (Maj 2011; Parnas 2012). Statements from a patient such as "I feel depressed, sad, or down" can cover a bewildering variety of experiences with varying affinities to the concept of depression—not only depressed mood but also, e.g., irritation, anger, loss of meaning, varieties of fatigue, ambivalence, perplexity, ruminations of different kinds, hyperreflectivity, thought pressure, psychic anxiety, varieties of depersonalization, and even voices with negative content. Moreover, mood is not an isolated mental object, easily dissociated from its experiential context and identified in an act of introspection (i.e., converted to a reportable symptom). It is, so to speak, a pre-given and pre-reflective manner of our experiencing (Gallagher and Zahavi 2008; Tallon 1997), something that is almost too

immediate and encompassing to be recognized as a mood (Heidegger 1927/1962) (see Sect. 5.6). Therefore, specifying the salient profile of the presented distress requires careful interviewing efforts. Taking a confirmatory or disconfirmatory answer at face value endangers the validity of the response and must always be kept at bay (Nordgaard et al. 2013).

In the process of eliciting symptoms that correspond to certain diagnostic criteria, there is a risk of focusing only on specific diagnostic criteria, facilitating a sort of "tunnel vision," and then terminating the examination of the patient once the criteria of that specific disorder are fulfilled. This may result in leaving out of the examination the exclusion criteria (differential diagnoses; see Chap. 14), which form an extremely important part of the diagnostic process. There is also a risk of Procrustean errors, where the symptoms are stretched ("data massaging"), ignored, or even seen as something else in order to fit the pre-given criteria.

4.1 The Fully Structured Interview

In principle, an interview can be conducted in three ways: (1) in a fully structured way, (2) in a free style with no structure, or (3) as something in-between that we call a semi-structured approach (see Table 4.1). The fully structured psychiatric interview is defined as: "consisting of a set of predetermined questions presented in a definite order. Diagnostic information is based on the patient's responses and the clinician's observations. These kinds of interviews attempt to identify symptoms and syndromes meeting specific diagnostic criteria" (Beck and Perry 2008; Nordgaard et al. 2012). Examples of structured psychiatric instruments are the Structured Clinical Interview for DSM-IV (SCID, First et al. 2007) and Mini International Neuropsychiatric Interview (MINI, Sheehan et al. 1998).

The renowned WHO-sponsored US-UK diagnostic project (Cooper et al. 1972) demonstrated markedly different diagnostic habits of British and American clinicians. It was clear from these studies that *a science of psychiatry* was not possible without strengthening the reliability of psychiatric assessments. The project also demonstrated that in research settings, the diagnostic differences could be minimized by using a standardized structured interview and shared diagnostic criteria (Cooper et al. 1972). This insight initiated the development of the structured interviews with the main goal to improve the reliability of psychiatric assessments.

The US-UK study motivated the so-called operational revolution, introduced in the 1970s with the publication of the St. Louis criteria (Feighner et al. 1972) and the Research Diagnostic Criteria, RDC (Spitzer et al. 1975). These attempts provided the background for the first "operationalized" diagnostic system, DSM-III, the

Table 4.1 Different degrees of structure in the interview

Fully structured interview	Semi-structured interview	Unstructured interview
Preformulated questions	No planned questions	No planned questions
Presented in a definite order	Plan for topics to be covered	No plan for topics to be covered

subsequent versions of DSM, and ICD-10. The declared purpose of DSM-III was "to provide clear descriptions of diagnostic categories in order to enable clinicians and investigators to diagnose, communicate about, study, and treat various mental disorders" (DSM-III p.12), but in the course of time, the operational criteria have had unintended consequences on clinical psychopathology: the criteria gradually became regarded as officially canonized symptoms and signs, and psychopathological features left out of the criteria largely faded into oblivion. Andreasen (2007) regretted that "there has been a steady decline in the teaching of careful clinical evaluation that is targeted to the individual person's problems and social context and that is enriched by a good general knowledge of psychopathology" (Andreasen 2007). Interview schedules such as the Structured Clinical Interview for DSM-IV (SCID, First et al. 2007) are constructed to be as directly compatible with the diagnostic criteria as possible to the point that the criteria are often used as the interview questions.

The rationale behind this is illustrated in Fig. 4.1; the idea is to minimize the information variance by asking all patients the same questions. The interpretation and criteria variance could be minimized by questions formulated as close as possible to the diagnostic criteria, ensuring minimal inference from the interviewer (Nordgaard et al. 2013).

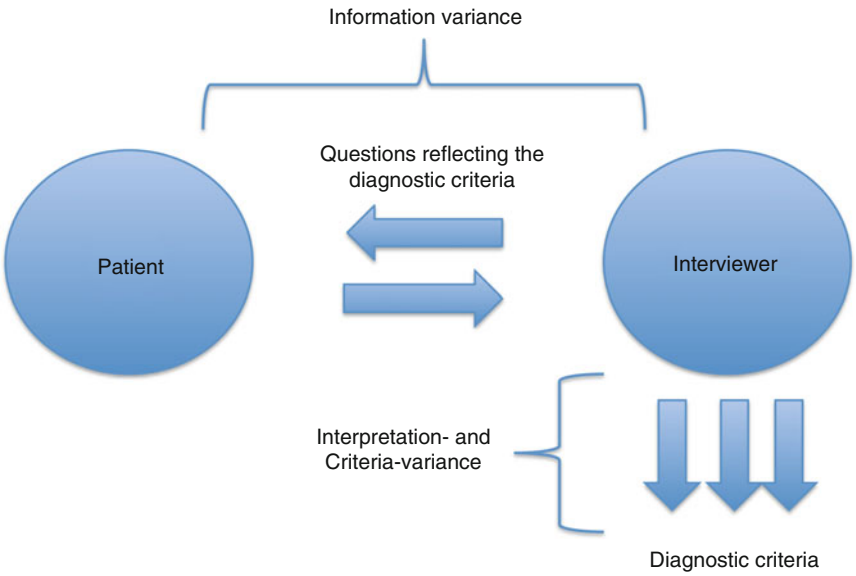

Fig. 4.1 Model of the diagnostic interview. The interviewer asks the patient questions that reflect the diagnostic criteria. The patient's answers (experiences lived in first-person perspective) must be converted to reportable data (something close to third-person perspective) in a format compatible with the diagnostic criteria. Variance may occur in what the patient tells the interviewer (i.e., information variance) and in the interviewer's interpretation of the information and Whether the interviewer finds the criteria fulfilled (i.e., interpretation- and criteria variance)

Robert Spitzer, a prominent figure behind DSM-III and subsequent editions, justified the use of structured interviews in his famous paper, "Psychiatric Diagnosis: Are Clinicians still necessary?" (Spitzer 1983). Here, he argued that any mental health professional could administer the interview schedule and make reliable ratings of psychopathology; clinical experience was not needed. Furthermore, using non-clinicians would be advantageous, as "the cost of employing clinically trained interviewers is prohibitive," e.g., in epidemiologic studies.

Due to the disastrous results of the US-UK reliability of the diagnoses, improved interrater reliability was just about the only conceptual or clinical argument offered to justify the operational project. The very notion of "operational definition," delivered by Hempel (1965), refers to Bridgman's book on theoretical physics (Bridgeman 1927/1951). "To find the length of an object," Bridgman says, "we have to perform certain physical operations. The concept of length is therefore fixed when the operations by which length is measured are fixed: that is, the concept of length involves as much as and nothing more than the set of operations by which length is determined" (Bridgeman 1927/1951 p. 5). Transferred to psychiatry, this principle proved inapplicable (Spitzer 1988; Parnas and Bovet 1995). The psychiatric object cannot be operationalized in Bridgman's sense. First of all, it escapes simple definition, and second, there is no "operation" possible. In operational nosological systems like DSM-5, the diagnostic criteria are simplified, standardized, nonspecific symptom descriptions written in lay language. The recognition of depressive mood, inappropriate affect, or identity disturbance cannot be reduced to easily identifiable, observable facts, but requires clinical judgment and complex pattern recognition. The psychometric concepts used in psychiatry stem from psychometric theory in psychology but without serious considerations about their relevance and applicability to the field of psychiatry (Bech 2004; Jablensky 2012; Nordgaard et al. 2013).

During the "operational revolution," behaviorism was a driving force in psychology (Skinner 1976). In the behavioristic stimulus-response paradigm, observable behavior was the focus of study, and notions like "the self" were relegated to "the black box." Science was supposed to focus on studying input (stimulus) and output (response) correlations in a setting of operant conditioning (the stimulus-response paradigm; see Fig. 4.2).

In sum, psychiatry did not possess adequate conceptual resources for redesigning its classificatory principles and nosological categories, but continued to apply behaviorist or operationalist approaches even after these were abandoned in psychology (on its way to becoming cognitive neuroscience) and in the philosophy of science,

Fig. 4.2 The stimulus-response paradigm. In this paradigm is it only believed possible to study the response to a stimulus. The subjectivity is represented by the *black box*

where more complex notions of the scientific enterprise were taking hold (Parnas and Bovet 1995). In psychiatry, there was virtually no discussion of such crucial issues as the nature of consciousness and the appropriate way of examining it. Even quite recent publications do not provide any theoretical or empirical-phenomenological arguments in favor of the structured interview (Nordgaard et al. 2012).

The structured interviews have a long history in survey research from where they originate. One of the pioneers within this field, Lazarsfeld, pointed out that the variability in how interviewers ask questions is the key to good interviewing and not a problem that can be solved by standardization (Lazarsfeld 1935). Mishler describes that in research interviewing, an essential problem, besides the stimulus-response model described above, is that "survey research is a context-stripping procedure, and investigators 'pretend' that a variety of contexts that affect the interview process and the meaning of questions and answers are not present." (Mishler 1986 p.22). Mishler elaborates "(…) the more significant problem is that respondents' answers are disconnected from essential sociocultural grounds of meaning. Each answer is a fragment removed both from its setting in the organized discourse of the interview and from the life setting of the respondent. Answers can be understood, or at least interpreted by the investigator, only by reintroducing these contexts through a variety of presuppositions and assumptions, and this is usually done implicitly and in an ad hoc fashion" (Mishler 1986 p. 23–24).

In the structured approach, the interviewer must faithfully ask in a predetermined sequence, a series of predefined questions corresponding to the diagnostic criteria. To maintain the purity of the quasi-experimental framework, it is crucial to minimize variance in the interviewer's performance and, especially, to quash any potential tendency toward inference and interpretation or any tendency for the patient to veer from the initial question. To render this more tangible, an example is now provided that consists of a sequence of a fully structured diagnostic interview with a hospitalized patient. The patient is 25 years old and admitted to a psychiatric facility for the first time.

Interviewer (I): Have you lost your appetite?
Patient (P): Yes.
I: Do you have difficulties falling asleep?
P: Yes, great difficulties.
I: Do you feel tired or lack energy to do the things you want to?
P: Yes, at times…
I: Are you critical of yourself or do you feel worthless?
P: Yes.
I: Do you have trouble concentrating?
P: Yes, often.
I: Do have a feeling of hopelessness?
P: Yes, I feel I'm hopeless.
I: In the last two years, what is the longest period of time where you have felt ok?
P: Hmm…I don't know… maximum a week.

The patient willingly answers the questions, but we gain very limited information about what the patient is actually experiencing. His replies are very short, and he is

not encouraged to elaborate. It is uncertain how he understands the questions and what kind of experiences he is thinking of when giving an affirmative answer. The patient is placed in a passive position, waiting for the interviewer to ask him the next question. The patient does not seem to have any initiative. In this excerpt, the interviewer is using three times as many words as the patient.

Two sorts of problems are apparent in the above fragment of an interview. One is that the patient does not volunteer any information that he was not asked about; the other is that more subtle issues often require a different *kind* of dialogue to elicit (e.g., self disorders). Both problems are related to what researchers in cognitive science call the "frame problem," the issue of how to decide what is relevant, indeed what is even the relevant overall *context* within which to approach a given problem (Shanahan 2009). The very nature of the structured interview precludes the sorts of relevance judgments and frameshifting that cognitive research shows to be necessary in situations requiring complex pattern recognition, which is obviously the case in most psychiatric interviews (Nordgaard et al. 2013).

4.2 The Unstructured Interview

The unstructured interview was developed in the disciplines of anthropology and sociology as a method to elicit people's social realities. In the literature, the term is used interchangeably with "informal conversational interview," "in-depth interview," "nonstandardized interview," and "ethnographic interview." There are several definitions of the unstructured interview. Here, we will offer two definitions: Minichiello defines it as an interview in which neither the question nor the answer categories are predetermined (Minichiello et al. 1990). Another definition is offered by Punch who describes the unstructured interview as a way to understand the complex behavior of people without imposing any a priori categorization that might limit the field of inquiry (Punch 1998).

In a psychopathological context, the fully unstructured approach poses some serious problems: we do need to cover certain areas of psychopathology in order to make a diagnosis. A very important part in the process of diagnosing is the differential diagnosis, which consists of distinguishing between a particular condition and others that present similar symptoms (see Chaps. 1 and 14). The interview must have secured enough information to develop a good global impression of the patient and a broad range of psychopathological information.

The following sequence is an example of a freestyle interview with a 35-year-old patient recently admitted to a psychiatric facility.

Interviewer (I): Just say whatever comes to mind.

Patient (P): I really worry about my cat. Who is going to take care of him while I'm in here? I could ask my mother to do it, but I'm not sure how long she will be home. She has been talking about going on vacation with some of her friends. Sometimes her and her friends buy a last-minute ticket, you know after she retired she can easily do that…just travel from one day to the next. Then she asks me to look after her apartment while she is gone… The last time she went to Indonesia and before that to Turkey…

Unstructured interviews can develop in all sorts of directions, making comparison of data from different interviews difficult. Against this backdrop, we conclude that the fully unstructured interview is not adequate for psychiatric diagnostic interviews.

4.3 The Semi-structured Interview

The semi-structured interview is placed between the fully structured and the fully unstructured interview. The interviewer has a plan, a checklist for the topics she wants to cover during the interview. Obviously, in our case: this topic is psychopathology. Questions are not prepared in advance. The interviewer must explore the items of his checklist in a sequence that is appropriate and adequate to the interviewee's own concerns and responses, according to the phenomenological principles proposed by Jaspers and others (Jaspers 1963; Carter et al. 2002). The *structure* of the semi-structured interview relies on the interviewer's obligation to allocate a diagnosis to the patient, which implies that sufficient psychopathology has to be explored. Yet, the concrete, practical conduct and sequence of the interview are dictated by the dynamics and context of the encounter, i.e., the style is free and conversational. The questions are contextually adapted and follow the logic of the patient's narrative, typically with questions asking for more details or further examples. The patient should be encouraged to speak freely, rarely be interrupted, and given time for reflection and recollection. It can be helpful to propose examples of pathological experiences to the patient. The patient is always encouraged to describe, in details by his own words, at least one concrete example of an experience, and only in case the concrete example fulfills the definition of the phenomenon in question, the interviewer may rate the relevant item as "present." In other words, a simple, affirmative answer ("yes") to a question about a given self-disorder is never sufficient to rate this item as present (Nordgaard et al. 2012; Parnas et al. 2005).

The semi-structured interview described here is phenomenologically informed. In the phenomenological tradition, the underlying specific meaning is never guessed, but is always explored (see Sect. 3.4). The following vignette is an example of how one can go wrong by assuming meaning:

> A young female patient cried through most interviews she participated in during her two-week admission. When asked why she was crying the patient said that she cried "when everything becomes too much, it is not because I'm sad. It is more a feeling of being anxious and not knowing how to react or handle things". She explained further that her crying had been a problem as long as she could remember. There had been several meetings between her parents and the school during her fist school years because the other children would distance themselves from her, due to her crying several times a day apparently for no reason. The patient had mistakenly been seen as depressed because of her crying.

Conducting an effective semi-structured psychiatric interview requires that the interviewer is intimately familiar with psychopathology. In the ideal situation, the

interview consists of a patient-doctor mutually interactive reflection—e.g., the interviewer poses a question, the patient tries to respond, and then the interviewer perhaps reformulates the answer by proposing an example and becomes corrected by the patient, who provides another example of his own and in his own language. Moreover, the interviewer must try to capture essential features of the experience in question through a further probing and using imaginative (see Sect. 3.4) variation. This mean that the interviewer, in his inquiry and attempts to represent the patient's experience, may change some aspects of the experience and retain others in order to strip the experience of its accidental and contingent features. The purpose is to grasp the features that are constitutive or essential for this type of experience, e.g., the essential differences between thought pressure and rumination, between pseudo-obsessions and true obsessions, etc. Yet, it is also important to recognize the limits to this process; it might not be possible for the patient to provide a clear description, and if pressured, he might change the subject or become frustrated. Additionally, asking questions about one symptom after the other is not an adequate way of obtaining psychopathological information (Parnas et al. 2005). Here follows an example of a semi-structured and conversational interview with the same patient as in the example of the structured interview described earlier (in Sect. 4.1):

Patient (P): I was walking in a crowded pedestrian street together with a friend. It was a very unpleasant situation to be in the crowd. To escape the crowds of people, we went down a small side alley. I fell into pieces and cried. I couldn't cope with the situation. Then we caught a bike-taxi to get away.

Interviewer (I): Why is it difficult for you in this kind of situations?

P: There are too many people, I can't keep an eye on all of them. I'm not in control of what might happen.

I: Why do need to keep an eye on other people?

P: I don't know. I just feel more comfortable when I know where people are. It is the same situation when I sit down at a table. I always place myself with my back against a wall, making it possible for me to see if somebody is coming… so I can see where everybody is.

I: Is that something new?

P: No, it is usual for me, but it has gotten worse and I think much more about it. A couple of years ago, I could ignore this tendency and sit where I was asked to sit. And I could walk in a crowded street. It is not possible for me anymore. Waiting in line has always been difficult for me, but I think that was because of me being impatient. Now it is because I'm afraid of humans.

I: Afraid of humans?

P: Well, it sounds a bit stupid, but that is the way I feel. Or maybe it is wrong to say that I'm afraid of people – I'm afraid of what might happen when there are lots of people.

I: Do you have any thoughts about what could happen?

P: No, I don't get that far… I'll give you an example: yesterday when I went to bed here at the hospital, I don't know why but I had an idea… I share a room with two other patients. I was lying in bed and couldn't calm my body down because my roommates had not returned yet. They should have been back by that time so I couldn't sleep, because if they came back and I was sleeping then I wouldn't know what they might do. My thoughts went on and on about why they hadn't returned yet. I thought it was because they were waiting for me to go to sleep because they wanted to hurt me. This is kind of the same in the situations where I try to keep an eye on other people. It was just more obvious to me yesterday when I couldn't calm down and go to sleep. It was like I was waiting for them to come back and go to bed. Because then I would know that nothing

would happen. Actually it was a bit silly because if they really wanted to hurt me they could easily do so even though they had gone to bed.
I: Did you really think that they wanted to hurt you?
P: Yes.
I: What about now, do you still think that your roommates wish to hurt you?
P: Not really. But you'll never know though… no, they probably wouldn't. My biggest problem is that I know these kinds of thoughts are nonsense, and it is stupid that they frighten me. But when I'm in the situation I get so afraid and I can't convince myself that it is nonsense.

In this interview, the patient is much more talkative, and even when he is asked closed-ended questions, he tends to elaborate his answers. He is allowed to recall and reflect, and he is not interrupted. He spontaneously makes a distinction in what he said: he is not afraid of people, but afraid of what people might do. The interview starts out with the patient saying that he does not know why he gets anxious in crowds, but during the interview, it becomes clear that he is afraid that other people will hurt him. There is a paranoid attitude behind his anxiety, an attitude that at times reaches a psychotic level. In this excerpt, the patient speaks much more than the interviewer; he uses almost ten times as many words as the interviewer.

4.4 Structured Versus Semi-structured Interview

The fully structured interview places both the patient and the interviewer in a difficult situation; one associated problem can be illustrated by the following example:

Interviewer: Do you ever hear sounds that other people cannot hear?
Patient: No.

How can the interviewer inquire further into this issue without the patient being annoyed and without risking injury to the rapport? The patient already said "no." The best way is to continue the interview in a conversational way and approach this subject from another angle. Another difficult situation is if the patient spontaneously volunteers information at the "wrong time" in the interview, e.g., a patient is being questioned about depressive symptoms and then starts telling about a strange experience not related to the question. If the interviewer, on the one hand, chooses to follow the patient's narrative, then the interviewer violates the guidelines for the structured interview, and the interview is now moving in the direction of a semi-structured interview. If the interviewer, on the other hand, chooses to follow the structured interview guide, then he must tell the patient that they will come back to the particular experience at a later point in the interview and then return to the depression items. The problem here is that a situation like this will affect the rapport, as the patient might feel that she is being cut off, and will produce less valuable information or maybe no information at all, as the patient might not be able to get in touch with the experience again at a later time or the interviewer might even forget to return to the experience.

Differences in the process of eliciting information are illustrated in the following transcripts: first, from a structured interview, and second, from a semi-structured conversational phenomenological interview with the same patient.

Structured interview:

Interviewer (I): Do you ever experience certain thoughts that are not your own are being placed your head?
Patient (P): Hmm, no.
I: What about thoughts being taken out of your head?
P: Shakes his head to deny.

Semi-structured interview:

I: Does it ever become too much with all these thoughts? (Referring to previously addressed experience of difficulties in concentration and of thought pressure)
P: Sometimes, I think the thoughts take over somehow, so I cannot get rid of them. Then the thoughts run their own race.
I: Can you say some more about that?
P: It's like the thoughts are out of my control.
I: Can you get a feeling that the thoughts are somehow alien… or not really your thoughts?
P: Yes, sometimes it is like they are… when the thoughts are kind of solemn thoughts or, how to put it, then I can get the feeling that they have been sent from another place, from elsewhere. Because, if they are not mine, and they are solemn thoughts, then they must be something special.
I: Do you have any idea from where they could have been sent?
P: From God.
I: What are solemn thoughts?
P: They are very different from my usual thoughts and are thoughts that other people don't think.
I: And then you think that God is sending you these thoughts?
P: Yes.

It seems the patient actually *does* experience thoughts being inserted into his head. Why, then, does he not reveal this in the structured interview? One reason might be that he does not recognize his own experience in the rather blunt, implicitly either/or formulation of the structured interview question. Another possibility is that the experience of insertion does not fully articulate itself for the patient until he starts to talk, in more general terms, of his experience of more subtle, albeit disturbing, alterations of the stream of consciousness (with its apparent progression through concentration difficulty, thought pressure, thoughts acquiring autonomy, alien thoughts, thought insertion, and delusional explanation). Yet a third possibility is that the patient does not want to appear crazy and does not answer affirmatively to a question with a content that sounds crazy.

Regardless of how an interview schedule is portrayed, it is the way it is used that is decisive for the degree of structure. For example, the patient is interviewed in a semi-structured way, and after having completed the interview, the SCID schedule is filled in; in this situation, it is a semi-structured interview. Similarly, an interview schedule that is supposed to be used in a semi-structured way, e.g., the present state examination (PSE, Wing et al. 1974), can be used in a fully structured way in which

the interviewer reads the questions aloud to the patient and follows the order of the PSE items.

Nordgaard and colleagues (2012) conducted an empirical study including 100 first-admission patients. All patients were first interviewed and diagnosed by a trained, non-clinician rater using the Structured Clinical Interview for DSM-IV (SCID, First et al. 2007). The trained rater used the SCID lege artis in a structured way. Within the same week, all patients would be interviewed in a semi-structured, conversational way by an experienced psychiatrist. All diagnoses were according to the DSM-IV. Finally, all patients were allocated a best consensus lifetime diagnosis by two experienced psychiatrists using all available information. The agreement between the SCID diagnosis and the best consensus diagnosis was very low ($\kappa = 0.18$).

Using the best consensus lifetime diagnoses as the gold standard, the sensitivity and specificity of the SCID for schizophrenia alone were 19 % and 100 %, respectively. The corresponding figures for all non-affective psychoses combined (i.e., schizophrenia and other non-affective psychoses), and the sensitivity and specificity of the SCID for the schizophrenia spectrum (schizophrenia, other non-affective psychoses, and schizotypy), are listed in Table 4.2 (Nordgaard et al. 2012).

The findings indicate that the fully structured interview used by a non-clinician is not a valid way of allocating diagnoses (Nordgaard et al. 2012). Table 4.3 shows the distribution of diagnoses in the study of Nordgaard et al. The diagnoses are divided into six major categories; the vertical direction is the best consensus diagnoses and horizontal shows the SCID diagnoses.

In this study, among the 100 first-admission patients, only 8 received the diagnosis of schizophrenia by the SCID, whereas 42 patients were diagnosed with

Table 4.2 Sensitivity and specificity of the SCID for schizophrenia, non-affective psychoses, and schizophrenia spectrum disorder

	Sensitivity (%)	Specificity (%)
Schizophrenia	19	100
Non-affective psychoses	34	96
Schizophrenia spectrum disorders	44	97

Table 4.3 SCID diagnoses versus best consensus diagnoses

	Best consensus diagnoses							
		Sch	NAP	SPD	MDD	Bipolar	Others	Total
SCID diagnoses	Sch	8	0	0	0	0	0	8
	NAP	8	0	1	0	0	1	10
	SPD	8	0	5	0	0	0	13
	MDD	10	2	11	14	0	13	50
	Bipolar	1	1	2	0	0	0	4
	Other	7	1	2	0	1	4	15
	Total	42	4	21	14	1	18	100

Sch: schizophrenia, *NAP:* non-affective psychosis, *SPD:* schizotypal personality disorder, *bipolar:* bipolar disorder I, *others:* organic disorders, OCD, anxiety disorders, personality disorder except SPD (Nordgaard et al. 2012)

schizophrenia in the phenomenological, semi-structured interview. And 50 patients were found to suffer from major depression by the SCID in contrast to 14 in the semi-structured interview. Most patients admitted to a psychiatric hospital will confirm that they feel depressed (probably in the layman's understanding of depression being equated with being in a poor mental condition), and if they additionally report a few uncharacteristic symptoms, e.g., troubles sleeping and bad concentration, then they are likely to receive a diagnosis of major depression in the SCID. For schizophrenia, it appeared that the SCID primarily intercepted the patients who had clear hallucinations and delusions and who willingly described them. The more disorganized patients with fluctuating psychotic phenomena and disorganized behavior and the "symptom-poor" patients tended to pass under "the SCID schizophrenia radar." For details about the sample and methodology, see Nordgaard et al. (2012).

Duffy and colleagues (2011) performed a literature review on bipolar high-risk (offspring) studies. They compared different methods of assessment and their impact on the study findings. Their conclusion was that methodology matters. The review showed that structured interviews conducted by trained non-clinician raters generally resulted in a broader spectrum of psychopathology and younger ages of onset of major mood disorders than those reported in studies using best-estimate diagnostic procedures and semi-structured interviews by expert clinicians.

The problem here is, as in the study by Nordgaard et al. (2012), that the non-clinician trained rater conducting the structured interview has to ask the questions irrespective of the situational and other context and accept the face value of the given answers. The elicited information is limited to the patient's literal answers, but does not necessarily reflect what the patient actually experiences. Irrespective of whether or not the affirmative answer actually points to a pathological experience, it still does not elucidate its qualitative and developmental nature. A characteristic feature of the structured interview is the danger of overconfidence in the face value of the answers, as if a simple "yes" or "no" truly confirmed or denied the diagnostic criterion at issue. There is an implicit assumption that symptoms exist as ready-made, *predefined mental objects*, *waiting in the patient's consciousness* for an adequate prompting to come into full view. To put it in another way, the structured interview *predefines what counts as information*. The nature of this information is conceived on analogy of a substantial, temporally enduring thing, almost like a table or a chair.

Benazzi (2003) conducted a study on the agreement of the diagnosis of bipolar II disorder between a structured diagnostic interview (the SCID) and a clinical semi-structured diagnostic interview based on DSM-IV criteria, conducted by the same expert psychiatrist. A total of 111 patients in remission from major depressive episodes were examined twice: first with the structured interview and soon after with the clinical semi-structured interview. All patients had been diagnosed and treated by the same psychiatrist months before their inclusion in the study. Patients diagnosed with bipolar II (DSM-IV) at the first interview were compared with those diagnosed with bipolar II in the second interview, and the kappa value for agreement was 0.16. The sensitivity of the SCID for bipolar II was 29.4 % and the specificity was 90.7 % (Benazzi 2003). However, the study has some methodological shortcomings: First of all is the fact that the same psychiatrist conducted both

interviews. Furthermore, it is very difficult for an experienced psychiatrist to conduct the structured interview in a mechanically faithful way, according to the scheme. He also had previous exposure to the patients, and this certainly influenced his diagnoses. Nonetheless, the results point, strikingly, in the same direction as the results from the Nordgaard et al. study (2012).

In an editorial in the *British Journal of Psychiatry* in 2011, Carlson writes about the very different rates of bipolar disorder in children reported in different studies: "Interviewers who lack experience in evaluating and treating true mania, and rely on the patients' responses to questions, probably rate mania differently from those who use pattern recognition" (Carlson 2011). Carlson concludes: "Until we understand how clinicians ask and understand parent and child responses to questions about their episodes and symptoms, and how they apply criteria that the DSM and ICD committees establish, we are trapped in an endless nosological debate." Thus, Carlson points to the same problem, viz., that the way in which questions are asked and answers understood is central for the diagnosis.

Our conclusion based on these considerations is that the semi-structured, phenomenologically oriented and conversational approach to interviewing is the only adequate way to assess psychopathology.

4.5 Rapport and the Interviewer

The phenomenological approach described is an eminently second-person situation in which interpersonal rapport is crucial. As a general rule, the established rapport with the patient is decisive for the quality of information gained at an interview. A good rapport is established by being genuinely interested in the patient and conveying to the patient that you really want to hear him describe his experiences and the significance he attaches to them. The interviewer should be as interested in the patient as he is in the patient's psychopathology. In short, the interviewer must convey that she truly wishes to understand the experiential structure of the patient, and this is an act of empathy. Crucially, empathy is not something that is shown through a few sympathizing remarks along the lines of "that must have been difficult for you," and it is not a technique to make the patient feel at ease. Rather, is it an atmosphere that permeates the entire interview, in which the interviewer through his attitude clearly signals his strong intention to understand the patient's experiences.

The term "empathy" is used in different ways; here we will quote Stein (1989), who uses "empathy" to describe all "acts in which foreign experience is comprehended" (Stein 1989).

In a variety of mental illnesses, the normal framework of experience and existence has changed (e.g., schizophrenia spectrum disorders), and without this framework, the straightforward psychological understanding that applies to normal conditions may be impossible. As Henriksen describes, the task of the interviewer is thus to reconstruct the altered framework and to imagine the impact this may have for, for example, acting, affects, and language use (Henriksen 2013). This idea is well articulated by Ratcliffe (2012) under the heading of "radical empathy": "radical empathy, I propose, is a way of engaging with others' experiences that involves

suspending the usual assumption that both parties share the same modal space" (Ratcliffe 2012 p.483). In other words, by bracketing our taken-for-granted assumptions about our natural sense of belonging to the world, our relation to others, and our normally unproblematic sense of embodied selfhood, we may empathically come to understand something of what it is like to experience the world, other, and oneself as the patient does. Evidently, for the patient to convey to the psychiatrist the type of experiences we are exploring here, a certain intimacy between the interviewer and the patient is required.

The label "conversational interview" implies that the patient is encouraged to express himself freely and through reasonably uninterrupted narratives. Empirical research on witness interrogation in the police has shown that a conversational approach, in which the witness is allowed to offer his own narrative, will enhance recollection and yield information that is more detailed and valid than will a series of closed questions (Fisher et al. 1987; Jakobsen 2007b; Kebbell and Wagstaff 1999). In the course of the phenomenological interview, the narrative is the primary source of information, modified by context-fitting questions, and requests for elaborations, details, and examples. Although the interviewer may occasionally propose an example, the patient's reply is only considered valid if he or she is able to come up with an example from his own experience, or at least rephrase the example in his or her own words. Such a phenomenological approach serves to establish a rapport with the patient that extends beyond diagnosis to facilitate a therapeutic alliance.

It is mandatory to try to establish a neutral, yet caring, rapport with the patient and ideally to provide the patient with a possibility to act as a partner in a shared, mutually interactive exploration. Most importantly, regardless of how uncommon or bizarre the reported experiences may seem to the interviewer, she must remain neutral and calm, yet with a restrained interested-caring attitude, and tacitly conveying to the patient that she is familiar with the sort of psychopathology that is being expressed. The skilled interviewer, who is knowledgeable in psychopathology and who is able to find some kind of structure of the stream of experiences that the patient reports, will often affect the patient to feel more secure. The patient will feel encouraged to elaborate more on her experiences and often volunteer more information. The interviewer should never adopt a curious or voyeuristic posture or a judgmental attitude.

Behaving "professionally" in the interview situation is sometimes confused with not showing oneself as a person or acting like a "mirror," as in classical psychoanalysis. Obviously, the interviewer's personality and attitude is of tremendous significance, and the interviewer should use his personality in the interview, but of course not self-disclose private information. In short: the interviewer should just be "himself." If the interviewer is genuinely interested in something the patient is saying (besides psychopathology), it is recommended to dwell a bit on that. Or if the patient comments on something that she saw on the news, it could be relevant that the interviewer also comments on it. The interviewer should respond to the patient by a nod, a "hmm," a "yes," or a similar response, when it is relevant in the interview. An interviewer who is relaxed, comfortable, and behaving like most people will usually have the effect of diminishing the patient's anxiety.

The famous report "Sexual Behavior in the Human Male" by Dr. Kinsey was published in 1948 (Kinsey et al. 1948). The report was the result of a large number

of interviews with people of all strata of the society about their sexual behavior. To ensure the best possible information on this delicate subject, Dr. Kinsey focused on *the very way the interviews were conducted*. Dr. Kinsey wrote: "The quality of a case history study begins with the quality of the interview by which the data have been obtained" (p. 35). He also stressed the importance of the interviewer's attitude: "One is not likely to win the sort of rapport which brings a full and frank confession from a human subject, unless he can convince the subject that he is desperately anxious to comprehend what his experience has meant to him" (p. 42). Here, Dr. Kinsey touches upon the very core of a successful interview as elicited above, viz., empathy as the wish to understand.

The interviewer must be aware of how her personality might affect the interview, e.g., does the interviewer have a tendency to sit too close to the patient or speak in a loud voice? Both can cause the patient to feel that his personal space is being invaded. Each clinician's behavior varies with respect to parameters like tone of voice, rate of speech, and loudness of voice (Shea 1998). The interviewer must pay attention to of the patient's expression and to some degree mirror the patient. For example, if a patient speaks in a very low voice, the interviewer should adapt the loudness of his voice.

Audio or film recordings of one's own interviews can be useful tools to become aware of and improve one's own practice.

4.6 How to Conduct the Psychodiagnostic Interview

Research into police techniques for questioning witnesses and persons charged with a crime, relevant to our concerns, showed that the following features produce less accurate information (Jakobsen 2010a, 2007a):

- The interviewer being very active rather than listening.
- Closed-ended questions.
- Interruptions.
- Not allowing for time to pause, reflect, and recollect, instead asking a new question as soon as the interviewee stops talking.
- Not trying to recreate the context of the situation asked about.
- Too many questions in sequence followed by answers place the witness in a passive position and do not enhance reflection or recollection.

In consequence, a new questioning technique called "the cognitive interview" was created that generates more accurate information (Fisher et al. 1987; Jakobsen 2007b, 2010b). Danish research studies examining the questioning of witnesses and persons charged with a crime provided results that were in line with the abovementioned findings. In one of the Danish studies, the police officers were interviewed before their questioning. The respondents reported that it was very important that the interviewee was allowed to speak freely and spontaneously, but the same interviewers, in fact, did violate these principles when they conducted the questioning (Jakobsen 2010b). In Box 4.1, we have listed some basic tips for conducting an effective interview.

Box 4.1. Tips for Conducting an Effective Interview

- Be genuinely interested
- Intend to try to understand the patient's framework
- Suspend the standard assumptions
- Let the patient speak freely
- Ask for a psychosocial history
- The patient should be more active and the interviewer more passive
- Allow time for reflection and recollection
- Be careful with interruptions
- Follow the patient's narrative
- Avoid too many question-answer sequences in a row
- Be knowledgeable about psychopathology
- Use open-ended questions
- Ask for elaborations
- Adjust your language, loudness of voice, etc., to the patient
- Do not use a fully structured approach

A psychiatric diagnostic interview should always be semi-structured, although switching between different degrees of structure during an interview can be advantageous in short passages. For example, conducting the first part of the interview with a very low degree of structure will provide important information about the patient's ability to structure his thoughts. Does the patient's speech become disorganized, do formal thought disorders appear or can the patient present her complaints and thoughts in a structured and coherent way?

The psychodiagnostic interview must begin with a psychosocial history, which is fairly easy, because it is factual and usually "safe" and because most people actually like to talk about themselves and their lives. The interview can be opened with a question like "So tell me about yourself" or "Why did you come here today?" depending on the context.

Allow the patient to speak freely, but within certain limits. This part of the interview serves to establish rapport and trust and, just as important, to provide an initial picture of the patient and his potential psychopathology, e.g., reflected in patterns of interpersonal functioning (e.g., behavior patterns across different ages, isolation, insecurity, suspiciousness, sexuality), educational achievements, work stability, tenacity, flexibility, ability to make choices, professional inclinations, spare time interests, etc. The social history also provides information about the *context* on the basis of which the patient's experiences are to be understood (e.g., are certain psychopathological features bound to specific situations, do they occur in virtually any situation, etc.). Furthermore, the social history indicates periods of time, experiences, etc., that would be relevant to further explore in the process of laying bare the psychopathology. To make this unintelligible, here is an example:

> A 30-year-old man shows up in the emergency room. He is crying and describing that he is feeling depressed and has problems concentrating and sleeping.

Obviously, these relatively unspecific complaints must be elaborated, and through the patient's psychosocial history, we will get a good impression of the kind of psychopathology. Let us look at two examples:

1. He tells that he was raised by his parents in a safe and loving home. As a child, he played sports and had many good friends. In school, he was a good student and he enjoyed being in school. He continued through high school, college and university and earned a law degree. He has now been working in a law firm for 3 years and got married 2 years ago. He has several close friends. The last couple of months, he has been feeling progressively sad, he has not been seeing his friends and his marriage has become increasingly difficult.
2. In the second scenario, the story is different: His mother committed suicide when he was 2 years old and he grew up with his father. He has always been a loner and was bullied at school. He had difficulties concentrating in school and often felt anxious. He dropped out of high school and has only had a few jobs since. He lives alone and has a few friends whom he sees once or twice a year. He spends most of his time playing computer games and has a reversed diurnal rhythm.

In case 1, we get an impression of an individual who has had a high level of functioning (and structure) throughout his life, but something seems to have changed within the last couple of months. The diagnosis of depression would be a relevant consideration. In case 2, the patient's primary complaints take quite a different cast: The patient might be predisposed for psychiatric illness given his mother's suicide, and it seems that he has had severe problems for years. The diagnosis of depression seems less relevant, more likely is a condition within the schizophrenia spectrum.

The interview must be kept in a conversational style, and the questions must follow the logic of the patient's narrative. The interviewer must listen carefully to the patient's narrative and ask for elaboration and clarification when appropriate. The questions should primarily consist of open-ended questions. The open-ended questions provide the possibility for the patient to elaborate on his/her experiences. In the late parts of an interview, it can be necessary to pose a few questions in a more structured way to be sure to have covered all of the planned areas. This will not break the flow of the interview, as the patient at this point will have understood that he is welcome to and expected to elaborate on his answers, and the interviewer has a good understanding of the context in which the patient's experiences can be understood.

When examining symptoms and signs, questions like "Do you hear voices?" are rarely very useful. How is the patient to know what kinds of experiences or phenomena this question covers? Here is an example from our clinic:

> A 20-year old female admitted to psychiatric hospital for the first time, due to suicidal ideations. The patient had been asked several times if she was hearing voices, which she denied. In a subsequent interview, she described that other people were talking about her and she could quote what they were saying. Further elaboration revealed that she heard them talking when she was alone in her apartment, and that she believed that she could hear people miles away talking about her.

The patient was obviously "hearing voices," viz., experiencing extracampine auditory hallucinations, but she did not understand the question, or possibly she did not recognize her experience from the way in which the question was asked.

4.7 Different Settings

The psychiatric interviews will vary with the context, e.g., the interview in the emergency room differs from the interview with a somatically ill patient or the diagnostic interview. In the emergency room, the situation is acute, and the most important goal of the interview is to clarify if the patient is psychotic, sui- or homicidal, and capable of taking care of him/herself. In short, the information is needed to decide whether the patient can be referred to an outpatient clinic or requires hospitalization and the necessary level of observation. Factual information about the patient and the situation bringing the patient to the emergency room is always mandatory. The rest of the examination depends on the patient's condition: Is she in severe affect, shouting and throwing things around, severely psychotic, mutistic, crying, or calm and talkative?

A recurring topic of discussion is malingerers trying to manipulate their way into being admitted into a psychiatric department. This is a peculiar discussion, at least in the cultural context of Western Europe (but probably also for most of the world). Why would anyone want to appear psychotic? And why would anyone wish to spend her time in a psychiatric hospital? These places usually have little attractiveness, and it is stigmatizing to be considered psychotic. The most likely reason for a person to show up in the psychiatric emergency room asking for admission is that the person is mentally ill. And, likewise, for well-known patients seeking admission, the most likely reason is that their condition is in exacerbation. Usually, mentally healthy people do not contact the psychiatric hospital acutely, not even in poor social circumstances with the prospect of spending the night on the street.

A different context is a psychiatric consultation in a somatic department. Most of the patients seen in this setting can be divided into two groups: (1) patients with no psychiatric history who, due to their somatic illness, exhibit behavioral or psychiatric symptoms and (2) patients who are hospitalized after suicidal attempt or patients with known psychiatric disorder who also suffer from somatic illness. In both situations, the main goal is to advice the somatic staff. The doctor must have access to the relevant files, laboratory test results, information about the patient's sleep pattern and behavior, etc.

4.8 Difficult Interviews

4.8.1 The Suspicious, Guarded Patient

Many psychotic patients try to conceal their symptoms. Some patients are markedly guarded, hostile, and dissimulating. There are multiple reasons why a patient would attempt to hide his or her symptoms: the patient might be delusional, believing that the doctors and staff at the hospital are conspiring against her; she may be harboring voices threatening her not to tell about them; she may dissimulate, wishing to be discharged; etc.

When interviewing a suspicious and guarded patient, it is pointless to ask directly about psychopathological phenomena, e.g., "Do you have a feeling that people are following you?" It is necessary to spend some time initially in the interview to

establish rapport on the basis of neutral subjects, e.g., the patient's social or medical history, and restrict the conversation to the facts for the present. Then, one can gradually expand the interview to get an impression of the patient's interpersonal relations, e.g., reactions with a paranoid coloring in relation to colleagues or friends. The interviewer must do her utmost not to place herself in opposition to the patient. As an example: if the patient says that he quit his job because "there were so much gossip in the office," it can be productive for the interviewer to comment that it can be very unpleasant to be a victim of gossip. From here, it will often be possible to clarify the reason for the statement, e.g., ideas of persecution, wrong treatment, etc. Here, more leading and closed, but neutral, questions can be helpful: "Could the gossips be due to envy, jealousy, or incompetence?" The interviewer should not declare her disagreement with the patient unless it is absolutely necessary, e.g., for legal reasons, but suggest treatment as beneficial to alleviate discomfort and anxiety (Hemmingsen and Parnas 2002).

4.8.2 The Withdrawn, Psychotic Patient

This is a patient who, on the one hand, appears to seek help or protection, at least to some degree, but, on the other hand, appears dismissive and frightened when approached. This type of patient is not hostile or arrogant. Often, the patient will have difficulties in describing his or her problems or concerns. A withdrawn patient with strange behavior and appearance will almost always turn out to be psychotic. The patient is often anxious, ambivalent, and perplexed. The rapport will often be affected to such a degree that it is not possible for the patient to describe hallucinations and delusions or that the patient is so perplexed that he or she is not capable of conveying his or her feelings.

The interviewer should adopt a friendly, neutral, and non-intrusive attitude with such a patient. These patients often have transitivistic experiences, making it necessary to keep an appropriate physical distance from them and to avoid physical contact if possible (e.g., shaking hands).

In order to attempt to establish rapport with the patient, it is important to devote sufficient time for the interview. Avoid situations in which the patient must make choices, as the ambivalence might make it difficult (Hemmingsen and Parnas 2002).

4.8.3 The Threatening, Aggressive Patient

There are several categories of threatening patients: psychotic patients, patients under the influence of alcohol or substances, and patients with personality disorders who are in severe affect. One should always be aware of one's personal safety and not be alone with the patient; the interview room must be equipped with an alarm system. The patient must not be allowed to take control of others by intimidation, and anxiety on the doctor/staff's side must not dictate the decisions made. The decisions must be based on a professional assessment.

The psychotic patient often fears his own aggressions, and his anxiety and aggression will amplify if he realizes that his behavior frightens others. It is important to appear calm and safe. Sometimes, it is possible to use the aggressive, psychotic patient's ambivalence to help him control his aggression by saying: "I know you are not a violent person."

The alcohol- or substance-intoxicated patient may have a clouded consciousness, and it is therefore important to express oneself clearly to avoid confrontations. Do not engage in discussions. Often, the patient can be calmed down be asking short, concrete, and neutral questions such as questions about somatic or social issues. This can be a way to obtain some rapport with the patient, making it easier to talk about other issues such as admission (Hemmingsen and Parnas 2002).

4.8.4 The Severely Exalted Patient

Risk factors for aggressive breakthroughs and physical assaults are listed in Box 4.2, Box 4.3, and Box 4.4. These include anamnestic factors, the patient's current condition, and the present circumstances. It is mandatory to obtain anamnestic information and integrate these with the patient's current symptoms, signs, and social situation.

Often, the exalted, aggressive patient will be diagnosed with schizophrenia or mania, and the patient will, in many cases, be intoxicated by alcohol or drugs. Alcohol- or drug-intoxicated patients with personality disorders can also present with exaltation and aggressions.

Obviously, the situation must be de-escalated. What is troubling the patient? If there is any reasonable way that the patient's wishes can be met, it should be done. Do not leave questions/demands/wishes unanswered, or if it is not possible to answer, then inform the patient when he will get his answer. Avoid all unnecessary provocations, and inform the patient about the plans related to his care: When will he see a doctor again? When can his restrictions be discussed again? etc. Ensure that the staff is informed about the plans, so that there is no confusion (Hemmingsen and Parnas 2002).

Box 4.2. Factors Associated with Aggressions and Hazards: Anamnestic Information

Anamnestic information
Previously convicted
Repeated impulsive behavior
Impaired ability to cope with stress
Declined ability to postpone needs
Repeated threats
Severe (social) problems

Box 4.3. Factors Associated with Aggressions and Hazards: The Patient's Condition

The patient's condition
Delusions, especially of persecutory or jealousy type
Untreated delusions
Hallucinations encouraging dangerous actions
Severe perplexity
Loud and noisy behavior
Threats or attacks on objects
Hostile attitude toward the staff or other patients
Unapproachable and tense appearance

Box 4.4. Factors Associated with Aggressions and Hazards: The Circumstances

The circumstances
Overcrowding in the ward
Lack of retreat options
Access to dangerous objects
Coercion, unexpected relocation, unexpected discharge
Intoxication by alcohol or drugs
Failing observation, uncertainty in the staff
Conflict escalation between patient and staff
Lack of or insufficient treatment of the patient

4.8.5 The Suicidal Patient

Assessment of suicidal risk is mandatory in all acute assessments. If the patient does not introduce this subject spontaneously, the interviewer must inquire into suicidal thoughts. Suicidal thoughts are experienced quite differently. They can vary from a vague, volatile wish not to exist to a firm decision and a detailed plan for how to commit suicide.

A patient suffering from depression can express a wish that he would not wake up from his sleep the next day without actually harboring any suicidal thoughts. Other patients are overwhelmed by strong and almost irresistible impulses to commit suicide, arising suddenly in their consciousness and often having a kind of intrusive, alien quality to them. These patients' behavior is unpredictable, and they are at high risk of committing suicide; close observation is necessary. Another group at high risk of suicide is psychotic patients with hallucinations that encourage them to commit suicide.

Patients who have decided to commit suicide often dissimulate, and in this situation, you have to rely on your own intuition, information from relatives, and assessment of other risk factors in their history. A clue can be hypochondriacal complaints from a patient who deeply believes that there is no hope of cure or a depressive conviction of irreparable consequences of what might seem like trivialities.

Some patients with personality disorders and/or substance abuse sometimes threaten to commit suicide in a manipulative way, e.g., a substance abuser who has spent all her money and demands to be admitted or to obtain medicine, but not really wanting treatment. The best way to handle situations like this is by de-escalating and trying to develop a reasonable plan. If the patient continues returning to the emergency unit, the most appropriate treatment must be discussed among the therapists. Even these patients must be carefully evaluated each time they show up as such patients often end up committing suicide.

Inpatients are continuously undergoing assessment of suicide risk, based on all observations. The questioning should not be performed in a ritualized, stereotyped manner, but is best done by a doctor who is familiar with the patient. In the first weeks of treatment with antidepressants, there is an increased risk of suicide, as the retardation decreases before the mood is improved (Hemmingsen and Parnas 2002).

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Mental State Examination: Signs

5

Abstract

Evaluation of the expressive signs is an indispensable part of the psychiatric diagnostic interview. The expressive phenomena are inseparably interwoven with the subjective experiences, and none of the signs can be viewed in isolation from the person and context from which they originate. The patient and his presented complaints congregate in certain patterns, emerging from a conjunction of the symptoms and signs, and unfold as meaningful wholes or Gestalts.

In this chapter, we describe a variety of expressive phenomena paramount for the differential diagnosis, including appearance and behavior, motor disturbances, catatonia, compulsions and pseudocompulsions, extrapyramidal side effects from antipsychotic medication, eye contact and gaze, rapport, mood, affect, speech and language, formal thought disorders, cognition, and self-harm and suicide. In each section, we provide a general description and specify in which disorders these signs are typically seen and outline different manifestations of each category. Throughout the chapter, we provide examples to illustrate the signs.

In this chapter, we describe and discuss the expressive phenomena of the mental state examination (MSE). In the psychiatric diagnostic interview, we aim at obtaining a comprehensive description of the patient's mental state, and the MSE offers a way to structure the description of a clinical assessment. The MSE contains a variety of domains, e.g., appearance, behavior, expressions of mood, and thought content. Here, our focal point will be expressive phenomena, i.e., signs. The sequence and names of MSE domains vary from author to author, and we have chosen the following sequence: appearance and behavior, motor function, eye contact and gaze, rapport, mood, affects, speech and language, and cognition.

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In Chap. 3, we saw that the psychiatric object consists of symptoms (subjective complaints or "inner") and signs (externally observable or "outer"). In the psychiatric interview, the patient and his presented complaints congregate in certain patterns, emerging from a conjunction of the outer and the inner and materializing as meaningful wholes (the Gestalt, see Sect. 3.2). Thus, we must attend just as carefully to the externally observable as to the patient's complaints.

A radical separation of symptoms and signs is epistemologically impossible, as most of the psychiatric signs involve subjective components (see Chap. 3). Further, the categorization of signs into clearly defined subcategories also poses difficulties, as the signs are closely related, mutually affect each other, and can be impossible to distinguish from each other without access to the patient's subjective experiences. The wordings themselves can imply a degree of diagnostic judgment, e.g., using the phrase "flight of ideas" or the word "incoherence" would typically depend on whether one's global impression of the patient indicates mania or schizophrenia. A further complication of the issue is that many signs are nonspecific; they are similar to the sign "fever"—they indicate that something is wrong or disturbed, but the sign can be reflective of a wide range of underlying causes, for example, "hoarding," which can reflect common sense problems, organic disorders, psychotic experiences, disorganization, negative symptoms, and obsessions.

Against this background, the categorizations we make in this chapter should merely be seen as an attempt to structure the field.

Observation and evaluation of expressive features or signs in the Mental State Examination are unfortunately often somewhat neglected components of the psychiatric assessment. A thorough observation of the expressive aspects of the Mental State Examination is paramount for achieving a global impression of the patient and consequently, for making the right diagnosis; do the patient's expressions fit with his thought content? Are they adequate? For example, a patient describing symptoms of a depressive episode and at the same time wearing festive clothes with sequins, lots of jewelry, exhibiting formal thought disorders, and not at any time trying to establish eye contact is not very likely to suffer from depression. None of the "objective" signs can be seen as isolated from the person and context in which there are observed. For example, an affect cannot be inadequate in itself; it can only be inadequate in relation to the content of conversation.

The signs are the examiner's evaluation of the patient's behavior, speech, etc., during the interview, in short, how the patient appears. Accordingly, this is the section in which the interviewer's observations and impressions should be recorded. The interviewer must pay attention to the patient's behavior at all times during the interview and use the observations to form testable hypotheses about the patient's structure and possible diagnoses. Special attention should be paid to the patient's appearance: How are the patient's facial expressions? Is she sitting still or constantly moving around? What about the legs and the hands? One should always be aware of changes throughout the interview, e.g., formal thought disorders often become more pronounced as the interview progresses and in low-structured parts of the interview.

The signs described here should be treated as observable facts and rated as present regardless of whether the patient or the interviewer can provide a plausible account of "why" (Meehl 1964), e.g., subtle twitching of facial muscles in a tense and anxious patient that might be interpreted as nervousness. But that would be an interpretation—one should stick to describing the observed. There is a caveat to the widespread practice of interpreting certain behaviors. Shifty eyes, staring, giggling, and mumbling are regularly called "hallucinatory behavior." However, we cannot be sure of the reason for the behavior until we have the patient's confirmation.

We have selected a wide variety of phenomena that we find to be particularly important for the differential diagnosis, but no list of human expressions can be complete. In the following, we have placed the phrases/phenomena/concepts used to describe the patient in italics.

5.1 Appearance and Behavior

An individual's appearance reveals important information about him. One of the first impressions we get when meeting another person is his *attire and grooming*: Here the interviewer should note the patient's clothing and notice whether the clothes are clean, appropriate for the occasion, very colorful, or put together in an unusual way. One should also pay attention to the patient's hairstyle, nails, facial hair, teeth, odor, piercings, tattoos, scars (from self-harm?) and their location, etc. (see also Sect. 12.4). A lack of grooming might indicate a lack of energy. Is the patient's appearance in agreement with the patient's subcultural standards (religious, goth, hip hop, etc.)? Does the patient appear his age? Does he come across as eccentric or odd? In general, people arriving at a doctor's office for an evaluation will try to look nice and make a good impression. Obviously, the situation will often be different for the patient arriving at the emergency room with the police.

The phenomena in this section and of "motor functioning" (Sect. 5.2) overlap greatly. In this section, we have collected the more complex patterns of disordered behavior. The rating should be based on what is observed throughout the interview, information from the patient, her relatives, and staff in the hospital/clinic. The following are included in this section:

- *Attire and grooming*
- *Dissimulation*
- *Guarded manner*
- *Inappropriate behavior*
- *Bizarre behavior*
- *Impulsive acts*
- *Impulsion*
- *Hoarding*
- *Gross failure to achieve*
- *Morbid rationalism*

Pay close attention to the patient's appearance during the interview—is she cooperating, restless, guarded, hostile, or dissimulating? The *dissimulating* patient will show varying degrees of trying to hide her symptoms. Dissimulation must be distinguished from the deliberately manipulating patient. Stilted (manneristic) behavior may give the impression of being deliberated, which it is not. In contrast, the *guarded* patient is keeping information from the interviewer that she, for some reason, does not want to share, often due to paranoid experiences.

Inadequate or inappropriate behavior is behavior that does not seem to fit with the situation or theme of conversation, e.g., laughing at a funeral or laughing when talking about serious and painful subjects. Inadequate affect can be the cause of inadequate behavior; another reason can be nervousness, e.g., a nervous patient might smile while talking about difficult subjects. The boundary between inadequate/inappropriate and bizarre behavior can be a question of severity. The term "bizarre" indicates a markedly unusual or strange behavior. Both dissimulation and inadequate behavior can be seen in a various conditions, most often in psychotic and schizophrenia spectrum disorders.

Bizarre behavior describes strange acts that seem odd or incomprehensible. There are different kinds of bizarre behavior: One is caused by a lack of common sense, i.e., *crazy acts* (*unsinnige Handlungen*; see also Sect. 8.4), which are expressive of a failure of implicit rationality (Sect. 8.1). The patient lacks a natural understanding of the world, of what is appropriate and relevant. These two examples are from our clinic:

> A young woman suddenly felt tired of her apartment. She collected all her clothes in a big pile on the floor in the living room and set the clothes on fire. Afterwards she explained that she just wanted to make her apartment disappear.

> A man who drove his car into the courtyard of a prison and kept tooting the horn. Later he explained that he wanted to boost the inmates' spirits.

Other variants of bizarre behavior are sudden aimless trips ("voyage pathologique", Eytan et al. 2007), unprovoked homicides, etc. The patients' explanations of their unexpected behavior are typically evasive, vague, or illogical. Some of these acts must be called psychotic because of their patent irrationality (Parnas 2012a). This is an example of a "voyage pathologique":

> A mother collected her son from school one day to take him on a late cancellation trip to Italy but without informing the school or anybody else. An Interpol notice was issued. Upon return she explained that they just needed a vacation. The same woman once asked a stranger in the street if he would allow her to touch his bald head, as she wondered what it was like.

Bizarre behavior is also seen as a response to psychotic experiences, e.g., by reacting to auditory hallucinations. A patient of ours behaved the following way:

> A man was constantly drinking large amounts of water because the voices were telling him that he needed to flush the devil out of his body.

Strange or peculiar behavior should always lead the psychiatrist to consider a psychotic condition, e.g., a person who shows up naked in the psychiatric emergency room, a person sitting in the lotus position on the floor in the emergency room waiting to see a doctor, or a person who sleeps on a branch of a tree every night, tying himself to the tree.

Bizarre behavior in relation to self-mutilation or suicidal behavior will be discussed in Sect. 5.10.

Crimes with a blurred or apparently absent motive should always lead to considering whether the subject might suffer from a mental illness such as, e.g., psychosis or organic disorders. For example, arson with an obscure or absent motive may be committed accidentally by a patient with dementia or as a response to hallucinatory voices by a schizophrenia patient (Sims 2003). Arson is relatively more frequent among patients with schizophrenia than in the general population, especially among females with schizophrenia (Munkner et al. 2009).

Yet another kind of bizarre behavior is *morbid rationalism* (Minkowski 1927), which is an extreme consistent rationalism reflecting common sense problems (see Sect. 8.3). Here is a vignette about a young man who was hospitalized for the first time:

> He could not cope with things and decided to "live simply." Therefore, he ordered the same food online every day, even though he didn't really like the food.

Eliminating the everyday choice of what to have for dinner and the trouble of making it does make his life simpler. But having the same meal for dinner every day—and food he does not even like—is strongly suggestive of common sense problems (and probably also of ambivalence. The daily dinner choice is apparently stressful for the patient, and this could be due to ambivalence).

Impulsive acts are executed forcefully with no deliberation or reflection, influenced by a compelling pressure (not from the outside, as in passivity phenomena) that restricts the subject's freedom of will. Since reflective control or consideration is lacking, the consequences of the acts are not taken into consideration (Scharfetter 1980). Impulsive acts are observed in several mental conditions such as borderline personality disorders but also in nonpatients (see Sect. 12.4 on impulsivity).

Closely related to impulsive acts are *impulsions*. *Impulsions* are sudden acts brought about by a failure to control intrusive impulses, i.e., more isolated breakthroughs than impulsive acts, often in conflict with the subject's underlying values. Impulsions are likewise seen in a range of mental disorders including psychoses, especially schizophrenia, as apparently incomprehensible acts (bizarre behavior). Jaspers provides the following example (Jaspers 1963) of a psychotic impulsion:

> A schizophrenic patient in the first stages of his illness reported the following: "We had had a party. On the way home I was seized by an idea out of the blue—swim across the river in my clothes. It was not so much a compulsion to be reckoned with but simply one, colossal, powerful impulse. I did not think for a minute but jumped straight in…only when I felt the cold water did I realize it was a most extraordinary conduct and I climbed out again. The

> whole incident gave me a lot to think about. For the first time something inexplicable, something quite sporadic and alien had happened to me."

In *hoarding*, the subject persistently collects pieces of rubbish, objects, etc., with no apparent purpose, and the subject has difficulties discarding things. In the DSM-5, this is an individual disorder. Hoarding is an unspecific sign and can be a reflection of various underlying disturbances such as anxiety, common sense disturbances, and psychoses. Hoarding is relatively common in schizophrenia and schizotypy, but also in other conditions, e.g., OCD and organic disorders (Sims 2003; Trzapacz and Baker 1993; see Sect. 10.4). Hoarding can also be a part of catatonic phenomena.

Gross failure to achieve describes the highly intelligent person who flunks out of school or, in spite of a college education, occupies a job far lower than expected or does not work at all. This should be considered present when there is a marked disparity between ability and realistic, socially defined attainment or status (Meehl 1964) and is indicative of a mental disorder, especially disorders within the schizophrenia spectrum. Minor underachievement is not sufficient.

5.2 Motor Function

A thorough description of the patient's motor activity in combination with posture and gait provides an image of how the patient looks. The different types of changes in the motor function contribute valuable diagnostic information. The motor function is evaluated by observing the patient, and additional information from the patient about his subjective experiences will contribute to designate the exact phenomenon. The disorders described in this section can be seen in organic disorders, in schizophrenia, in depression, and in nonpsychotic disorders such as Gilles de la Tourette's syndrome.

The distinction between motor function and behavior is arbitrary, and in this section, we have chosen to discuss the following phenomena:

- *Posture and gait*
- *Para-axial postures*
- *Gebundenheit* (*restriction*)
- *Psychomotor retardation*
- *Benommenheit*
- *Apraxia*
- *Echopraxia*
- *Jactation*
- *Hypokinesia*
- *Hypomimia*
- *Increased psychomotor pace*
- *Hyperactivity*
- *Agitation*
- *Rituals*

- *Automatisms*
- *Tics*
- *Iterations*
- *Hyperkinetic states*
- *Grimacing*
- *Hypomimia*
- *Omega sign*
- *Veraguth's sign*

The interviewer should notice the patient's *posture and gait*. The patient can take *para-axial postures* with a striking axial position of the joint with respect to the torso, e.g., a patient sitting on a chair with the upper part of the body pointing in one direction and the legs and head in another direction (Sigmund 2004) or keeping her head in a tilted position. The posture can also be stooping or lacking spontaneous movements of the arms when the patient is walking, as in *Gebundenheit* (*restriction*), which is a stiffness of posture and movements. The vertebral column is in a stiff position with light stooping and lack of natural swing of the arms. Gebundenheit was introduced by Bostroem in the paper "Encephalitische und Motilitätstörungen" (Bostroem 1924); here, he distinguishes between "rigid stiffness" (i.e., with no spontaneous movement) and "nonrigid stiffness" (i.e., with spontaneous movements). The nonrigid type is Gebundenheit, which is seen in schizophrenia. The rigid type is seen as extrapyramidal side effects and in organic disorders (Homburger 1932). In Gebundenheit, the restriction is stable over longer periods.

Psychomotor retardation (or inhibition) is characterized by stable motor latency and slowing down of all mental and motor processes, reflected in, e.g., hypomimia, diminished gesticulation, and toneless voice. It is typically seen in core depression (bipolar and melancholic) but may also be seen in the schizophrenic state of *Benommenheit*, which is a symptom complex described by Bleuler (1930) (see also Sect. 7.5.1) usually associated with catatonic stupor. Benommenheit is characterized by a slowing down of all psychic processes, but there is no depressive mood as in depression. It is often accompanied by pronounced *apraxia* (which is difficulty with motor planning to perform tasks or movements when requested):

> A patient required five hours to dress her self; she substituted the blouse for the skirt or the slip. She picked up the shoe brush to brush her teeth, but brushed her clothes instead and spread toothpaste on the shoes. Only after years of vain trials, I finally succeeded in getting her to close a door on command. Spontaneously she could do such little things very well, but on command she usually failed and became more and more confused. Instead of closing the door as asked, she would pass through it or open it even wider. When she finally had succeeded in closing it, she would usually find herself on the outside of the room instead of within. (Bleuler 1950 p. 221–222)

Frequent in Benommenheit is also *echopraxia*, referring to involuntary imitation of other people's actions. Comprehension of external impressions and orientation may be impaired. In writing, words and sentences are incomplete. Benommenheit may be a long-lasting state. In depression, retardation, proportional to the depressive

mood, is related to the altered temporal structure, in which some patients also describe a subjective experience of "lagging behind," whereas in schizophrenia, it is more likely associated with perplexity (see Sects. 5.8 and 8.3). Both apraxia and echopraxia are frequent in organic disorders, schizophrenia, and as cataonic phenomena. Alternating motor activity comprises latency as a response to delicate questions, and inconsistent patterns, e.g. chattiness combined with a loss of facial expression, are compatible with a schizophrenia spectrum disorder. Stupor is extreme motor inhibition (see Sect. 5.3.1).

Against a background of inhibition, various *psychomotor excitation phenomena* can arise simultaneously, e.g., *jactationen*, which is a kind of restlessness, often performed with a monotonous rhythm. It can be a brief splaying of the fingers, a shrug of the shoulders, or a similar action (Sigmund 2004).

Hypokinesia is a decrease in bodily movements. Hypokinesia can be due to basal ganglia disorders, e.g., Parkinson's disease or other disorders. In depression, hypokinesia will be due to retarded psychomotor pace. Gebundenheit can also cause hypokinesia. *Hypomimia* is a subtype of hypokinesia with pronounced decrease in facial movements and expressions. In schizophrenia, hypomimia is often characterized by a marked rigidity of the upper half of the face, with the movements of the lower part of the face being less restricted (Sigmund 2004). It is seen in several mental conditions, e.g., depression and schizophrenia.

In *increased psychomotor pace*, the motor and mental activity is accelerated, often including lively or exaggerated facial expressions and gesticulations. Increased psychomotor pace is frequent in mania, in organic disorders, and in psychotic exaltation. *Hyperactivity* refers to exaggerated physical activity as seen in ADHD, mania, psychosis, delirium, and drug intoxication.

Agitation is characterized by increased inner turmoil and restlessness. The patient will often be tampering, curling the napkin, tampering with his clothes, or wringing his hands. He can be bewildered, clingy, and constantly help-seeking. The agitated patient can usually describe a subjective state associated with and resulting in the physical expression such as marked signs of anxiety and worrying. This is most often seen in depressive states and especially in middle-aged and older patients but also in other mental disorders, e.g., anxiety and psychosis. Agitation and psychomotor retardation are independent phenomena. They are not opposites and do not exclude each other mutually. Agitation is more of a sort of nervous movement, primarily of smaller muscles that may be accompanied by a general slowness of the larger muscles. Agitation may be confused with parakinesia (see Section 5.2.1), but parakinesia describes irregular catatonic movements. Agitation must be distinguished from stereotypies in which the patient repeats certain movements (Wing et al. 1974a). Another important distinction is between agitation and akathisia: in agitation, the motoric manifestation is associated with or caused by the subject's inner state (Sims 2003). Agitation should also be distinguished from gross excitement in which the subject runs rather than walks and is much wilder and perhaps hostile (Bertelsen et al. 1999).

Rituals are recurring stereotypical patterns of behavior. Rituals can be seen in obsessive-compulsive disorder and in developmental disorders they have no

understandable purpose, but in catatonia they may be related to psychotic symptoms, e.g., commanding voices, may have the character of pseudocompulsive acts magically related to a pseudo-obsession (e.g., preventing somebody from dying by performing certain movements) (see Sect. 5.3.2), or may have no explicit meaning for the patient.

Automatism or automatic behavior describes involuntarily movements, usually purposeless and often appearing bizarre. Consciousness is impaired during automatic activity. The patient is either unresponsive or overtly confused and often the patient has no recollection of the automatism. It can include lip smacking, chewing, or more complex behaviors such as undressing. Automatisms are most commonly seen in complex partial seizures, especially the more complex automatisms. Automatisms are also seen in fugue states. More simple automatisms can occur in schizophrenia and must here be understood as catatonic phenomena (see Sect. 5.3.1) (Trzapacz and Baker 1993). They manifest themselves as automatic actions like stereotypies, e.g., raising the arms or walking in circles (Bleuler 1950 p. 199ff), and are experienced by the patient as "split off" from his consciousness, "as if he were a third person" (loss of ipseity: see Sect. 8.3). The patient is ignorant of the motivation. In some cases, she may feel a compelling force (not from the outside as in passivity phenomena) or may be in a trance-like state of mind.

Tics are brief, involuntary, pointless movements or vocalizations that range from simple to complex (e.g., repeated clearing of the throat or bliking and turning the neck). Tics are often associated with a premonitory urge or "buildup" sensation to perform the specific movement and usually associated with the sensation of relief once performed. Tics are often distractible. They are distinguished from stereotypies by being rapid, discreet, intermittent movements and not repetitive in the same way as stereotypies (Mayer-Gross et al. 1954) and additionally by the subject's inability to consistently resist them (Trzapacz and Baker 1993) (see stereotypies in Sect. 5.3.1).

Iterations are monotonous, inexpressive repetitions of a just-intended voluntary movement, e.g., a quick repetition of the movement of "sitting down" several times (Sigmund and Mundt 1999).

The omega sign and Veraguth's sign are facial expression for certain mental disorders. The omega sign refers to a characteristic facial expression with elevated eyebrows, vertical skinfold over the glabella, searching and wide-open eyes, and tense features. This is seen in agitated melancholia patients, highly anxious patients, and schizophrenia patients (Greden et al. 1985). *Veraguth's sign* (or Veraguth's eyelid folds) is a common facial expression associated with depression, involving triangle-shaped folds in the nasal corner of the upper eyelid (McDaniel et al. 2004).

5.2.1 Catatonia

Catatonia describes disturbances of motor functioning that span a continuum from milder nonpsychotic to severe, psychotic disturbances. Catatonia includes a variety of movement and posture disorders that tend to be intermittent and involve, to at least some degree, the surrender of the affected person's will. Common for the

different catatonic phenomena is that they cannot simply be classified as disorders of power, tone, coordination, praxis, or involuntary movement (Cutting 1985). Catatonia is common in schizophrenia and in organic disorders but can also be seen in other conditions. In this section, we have included the following catatonic phenomena:

- *Stupor*
- *Akinesia*
- *Mutism*
- *Negativism*
- *Ambitendency*
- *Gegenhalten*
- *Automatic obedience*
- *Forced grasping*
- *Mitgehen*
- *Mitmachen*
- *Stereotypy*
- *Verbigeration*
- *Mannerisms*
- *Hyperkinetic states*
- *Parakinesia*
- *Paramimia*
- *Grimacing*
- *Schnauzkrampf*
- *Catalepsi*
- *Flexibilitas cerea*
- *Psychological pillow*
- *Motor perseveration*
- *Echolalia*

In 1873, Kahlbaum described a nosological entity which he named catatonia or, "Spannungsirresein" or "tension madness", whose salient feature was muscular tension "with the genrel character of spasm", e.g. in the shape of catalepsy and stupor; (Kahlbaum 1873/1973). S*tupor* consists of a triad of *akinesia* (no movements), *mutism*, and relative preservation of consciousness. The schizophrenic stupor, probably related to perplexity (see Sects. 5.8 and 8.3), is characterized by rigidity (hypertonia), while in depressive stupor, which is expressive of severe psychomotor retardation (Cutting 1985) (and a criterion of ICD-10 severe depressive episode with psychotic symptoms), there is no change in muscle tone. Furthermore, a "deadpan" facial expression is said to be a feature of schizophrenic stupor, as opposed to depressive facies. Stereotypies and incontinence of urine and feces are absent in depressive stupor (Fish 2007). The distinction between the organic, the schizophrenic, and the depressive stupor can be difficult. Stupor with organic etiology often has an acute or subacute onset, and the depressive type of stupor is typically less pronounced than the schizophrenic stupor. The signs in Table 5.1 may

Table 5.1 Stupor in depression, schizophrenia, and organic disorders

Core depression	Schizophrenia	Organic disorders
No changes in the tonicity	Frequently hypertonia	Hypertonia can be present
Facial expression: anxious, sad, or perplexed	Facial expression: serious, stiffened ("deadpan")	The facial expression does not seem to reflect an underlying depressive state
Rarely urine or feces incontinence	Often urine or feces incontinence	Often urine or feces incontinence
No catalepsia	Rigidity/muscular tension can be present	Rigidity/muscular tension can be present
Usually normal targeted eye movements	Usually normal targeted eye movements	Abnormal eye movements ("doll's eyes") (depending on the cause)
Stupor is not terminated by benzodiazepines administered i.v.	Stupor is terminated by benzodiazepines administered i.v.	The level of consciousness will be lowered by benzodiazepines administered i.v.

provide some guidance. Among the possible causes for organic stupor are toxic, metabolic, or structural cerebral lesions or neoplastic, malignant neuroleptic syndrome.

Negativism is not a unitary phenomenon but a broad category of symptoms and signs characterized by the fact that the patient resists to carrying out action shi is requested or commanded to do (passive negativism) or does exactly the opposite (active negativism). This is called "outer negativism." The "inner negativism" affects the patient's will. She cannot do exactly what she wishes to do because before carrying oth the action an inhibition, a contrary or cross impulse, prevents her from doing so (Bleuler 1912). Bleuler provides this example of inner negativism:

> So we see patients who rush to take a proffered bit of food, stop half way between plate and mouth, and finally refuse the morsel; with every other act the same results follow. (page 4, ibid.)

Ambitendency is also a negativistic phenomenon and closely related to the subjective experience of ambivalence (Bleuler 1912). For every tendency, the patient immediately gets a countertendency, an example being the patient who is unable to leave the room because whenever she starts moving her legs, she must stop halfway through the movement and step back. Soon afterwards, she tries again with the same result.

Gegenhalten (German for "resisting"), or opposition, is the automatic resistance to passive movement. In a*utomatic obedience*, the patient carries out every command given to her. In *forced grasping*, the patient presents her hand whenever the examiner presents his hand for a handshake, in spite of instructions not to do so. *Mitgehen* (German for "going along") describes the phenomenon in which the interviewer can move the patient's limb or body by directing him with a

fingertip's pressure (Fish 1962). For example, the examiner places a light pressure on the patient's elbow in order to stretch the patient's arm. She reacts by stretching her bended arm, even if the she is instructed not to do so. The fact that there is no resistance to the passive movement is called *Mitmachen* (German for "putting up with").

Mutism is the absence of speech and can be caused by both psychiatric and neurologic disorders. The psychiatric type of mutism is a catatonic phenomenon. Transient or *elective mutism* is also the absence of speech but is usually psychogenic, for example, after a traumatic experience.

Stereotypies are non-goal-directed movement patterns that are repeated continuously for a period of time in the same way and on multiple occasions. The movements are not related to any internal state or motivation. Stereotypies can also be seen in writing, art, etc. There is some overlap between stereotypies and tics (see Sect. 7.7.4). Stereotypies can be distinguished from tics as seen in, e.g., Tourette's syndrome by the following: stereotypies are more fixed in pattern and involve the arms, the hands, or the entire body, and they are repetitive and continuous; tics are rapid, discreet, intermittent movements like blinks, grimaces, and shrugs and are usually preceded by premonitory urges to reduce an inner tension (Edwards et al. 2012). Both stereotypies and tics can be distinguished from automatisms by the preservation of clear consciousness. Both tics and stereotypies are suppressible by distraction, although stereotypies are more so; for further distinction, see tics in Sect. 5.2. Stereotypies should also be distinguished from agitation—in agitation, the patient can describe anxiety or a similar state, and the patient does not perform repetitive movements (Bertelsen et al. 1999).

Verbigeration is meaningless repetition of words or phrases. Verbigeration does not follow an external stimulus, e.g., a question, as perseveration does. Verbigeration is a special case of verbal stereotypy (Bleuler 1911). The following is an example of verbigeration:

> I am a philosopher, philosopher, I am a philosopher, who composed great literature. I have a calling for this work, a calling, calling. You don't have to believe me, believe me, not believe, not believe. I don't care, care, care, care. (Kircher et al. 2014)

Mannerism refers to a goal-directed action performed with inappropriately exaggerated expressivity. Mannerisms can be observed both in speech and behavior. Some patients manifest speech mannerisms, for example, talking in an affected or professional way. In his original paper on hebephrenia, Hecker (Hecker and Kraam 1871/2009a, b) describes a patient adopting an officer's jargon and a Jewish jargon. The manneristic expressive style in a schizophrenia spectrum patient often strikes the psychiatrist as a kind of affliction, i.e., more as something that happens to the patient, in contrast to a histrionic theatricality, which typically conveys an aura of something willfully intended, purposeful, or subtly manipulative (Tatossian 1999). Mannerisms include grimacing and posturing (Cutting 1985) and can resemble compulsions (see Sect. 5.3.2), but fearful thoughts/worries quickly disappear, and true obsessions are absent. Manneristic behavior is closely related to schizophrenia.

Binswanger describes it the following way: "It can be regarded as a 'loss of sparkle', a freezing and repetition of present existence, and a reflection of the intellectual side of man's nature rather than the 'free play' of individual life forces. It is as if there is an 'iron net' round the free expression of gestures, an invisible and incomprehensible force which is stifling the natural flow of life" (Binswanger 1956/1987). Examples of mannerisms are stereotyped kneeling, grimacing, touching the floor, touching objects or other patients, turning the body before passing through a door, pushing rocks and paper off the sidewalk, peculiarities when eating, holding a spoon in an odd manner, putting the fork down after every bite, and peculiarities when visiting the bathroom.

Hyperkinetic states. Motor excitement is an unspecific sign observable in diverse mental conditions, and it can be a catatonic sign. Catatonic excitement can consist of senseless violence and overactivity in which the patient gives a strange, odd impression to the observer (Fish 1962). The patient destroys objects and furniture and makes violent senseless assaults on fellow patients, doctors, or staff. The excitement can also consist of continuous overactivity, e.g., a patient pacing up and down the hallway, constantly moving his body, slamming the doors, shouting, laughing, singing, and playing the fool. The overactivity can alternate with stupor. Many of the movements can be similar to those seen in patients with lesions of the cerebellum and the cerebellar tracts such as athetotic, choreic, or other involuntary movements. Sometimes the movements look like reactions to bodily sensations. Patients might slam their head against the wall, assume animal postures, or gesticulate. Most of the movements are quickly interrupted, and new ones take over (Fish 1962; Mayer-Gross et al. 1954; See also Sect. 11.1.4). The schizophrenic catatonic hyperkinetic state must not be confused with mania. The mood of the manic patient will be elevated, joyful, and often contagious. The manic patient will be in contact with his surroundings and will not exhibit formal thought disorders (Mayer-Gross et al. 1954).

Grimacing, which is an involuntary facial distortion, extending from very discrete movements of the facial muscles to pronounced distortion of the face, is common. Grimacing, considered a mannerism, belongs at the same time to the hyperkinetic states (Jaspers 1959/1963). *Parakinesia* are non-goal directed, involuntary, irregular, tick-like movements for an example repeatedly closing or squinting the eyes (Parnas et al. 2005). It is seen in organic disorders as well as in schizophrenia. *Paramimia* is a subtype of parakinesia and denotes incongruity of the facial expression. Typically, there is is a discordant expressivity of parts of the face with immobility of the expressive muscles of the upper part of the face and more cheerful expressivity in the lower part. *Mimic expressions* are always affected in catatonia. The facial expressions can be diminished or expressionless. Another example of an abnormal facial expression is *Schnauzkrampf* (snout spasm), which consist of a marked wrinkling of the nose and protrusion of the lips.

Catalepsy or posturing is the maintenance of an uncomfortable, often odd or bizarre, position of the body for an unusually long time. *Waxy flexibility* (*flexibilitas cerea*), a special case of catalepsy, is the retaining for several minutes or longer of any bodily position brought about by passive movements. A slightly increased tension provides the examiner with a "waxy" sensation when she moves the patient's

limbs. Still another cataleptic phenomenon is the *psychological pillow* in which the patient, lying in bed, holds his head elevated a bit over the bed as if there were a pillow beneath his head. This uncomfortable position can be maintained for hours (Bleuler 1912; Fish 1962).

Motor perseveration is the continuation of a goal-directed activity after the need for this activity has ceased. It can involve a variety of activities, e.g., an act, but it differs from a stereotypy because it is initiated as a goal-directed activity. Perseveration of the theme of thought, words, or sentences will be described under thought disorders (Sect. 5.8.1).

Echolalia is an automatic repetition of other people's verbal utterances, whereas echopraxia is repetition of other people's movements. Sounds and movements are imitated without the patient noticing it.

Mild catatonic trait-like signs, named structural deformations of movement by Sigmund and Mundt (1999, p.15), are probably rather specific for the schizophrenia spectrum. Those authors present the following list:

1. Gebundenheit (see Sect. 5.2)
2. The emergence of psychomotor excitation even simultaneously with Gebundenheit
3. Parakinesis (or parakinesia)
4. Iterations
5. Movement stereotypies

Re 3: Parakinesia is also used in a somewhat broader sense as irregular or disorganized movements, thus bordering or overlapping with motor agitation and grimacing.

Re 5: Stereotypy is broader than this subtype, as it also covers postural motor stereotypies (maintaining the same position, e.g., extending fingers), and non-motor manifestations: occupying the same seat, using stereotyped, idiosyncratic language or spelling, repeating the same element in paintings, etc. (Bleuler 1950 p. 185ff).

5.2.2 Compulsions/Pseudocompulsions

Behavior resembling compulsive rituals may be observed, and in order to determine the nature of the behavior, information about the thought content is required. Compulsions are obsessional motor acts. The obsession motivating the compulsion may present itself as a thought, a mental image, an impulse, or a feeling with a subjective sense of the urge to act overriding the internal resistance. What characterizes the true obsession is that the subject recognizes the content of the obsession/compulsion as absurd or morbid and tries to resists it. If there is no resistance and the obsession/compulsion is more egosyntonic, then we are dealing with a *pseudocompulsion*. Thus, differentiation is not possible without knowledge about the patient's thought content. True compulsions relate to the obsessional thought content in a causally meaningful way, and they ameliorate tension and worry for a

while, for example, washing compulsions following contamination obsessions. The washings themselves are often governed by a ritual consisting of several formal stages, with each stage having to be performed with meticulous accuracy (Mayer-Gross et al. 1954) (see Sect. 10.4).

Compulsive symptoms can occur in individuals with no mental disorder, in OCD, in individuals suffering from organic and non-organic psychoses, in depression, in anxiety disorders, and in personality disorders. Pseudocompulsions can be catatonic acts, e.g., stereotypies, magic rituals, or reactions to psychotic experiences.

5.2.3 Extrapyramidal Side Effects of Antipsychotic Medication

In this section, we describe movement disorders associated with antipsychotic medication. In some cases, it can be difficult to distinguish between these drug-related side effects and movement disturbances in the course of a mental disorder. The reaction to lowering or discontinuation of antipsychotics, anticholinergic medication, and the onset of the symptoms will often assist the distinction. However, the side effects can be tardive and not disappear with discontinuation of antipsychotic medication. The side effect included here are:

- *Drug-induced Parkinsonism*
- *Akathisia*
- *Acute dystonia*
- *Pisa syndrome*
- *Tardive dyskinesia*

Extrapyramidal side effects include *drug-induced Parkinsonism* with tremor; bradykinesia; cogwheeling; abnormalities of gait, speech, and posture; excessive salivation; swallowing problems; and greasy skin.

Akathisia is motor restlessness. The subject experiences feelings of motor unease, inner restlessness mainly involving the legs, and a compulsion to move. Many engage in repetitive movement. Akathisia can be confused with agitation (see Sect. 5.2). Restlessness may cause the patient's difficulties in sitting still. Akathisia is not related to mood, affect, or thought content.

Acute dystonia describes intermittent or sustained muscular spasms and abnormal postures most frequently in the muscles of the eyes, tongue, or mouth. It can cause laryngospasm, unilateral spasm of the sternocleidomastoid muscle with torticollis, eyeballs rolling upward, oculogyric crisis where the neck is extended together with upward rolling of the eyeballs and opisthotonus (Sims 2003; Trzapacz and Baker 1993). Acute dystonia can be confused with catalepsia—in contrast to catalepsia, acute dystonia can be treated within minutes by anticholinergic drugs.

Pisa syndrome is a dystonic syndrome that is characterized by a lateral flexion of the trunk when sitting or standing (Ekbom et al. 1972). It is associated with

treatment with antipsychotic medication, antiemetics, and/or cholinesterase inhibitors. Idiopathic cases have been seen in which the patients have not been treated with any drugs.

Tardive dyskinesia involves involuntary movements of the tongue, jaw, trunk, or extremities. The movements are spasmodic with subjective impairment. Different patterns can be seen: choreiform (rapid, jerky, nonrepetitive), athetoid (slow, sinuous, continual), and rhythmic (stereotypies). Symptoms include abnormal movements that look like persistent chewing, lip smacking, or repetitive tongue protrusions. These are buccolingual masticatory (BLM) movements. The movements may increase if antipsychotic medication is lowered or discontinued and may be temporarily hidden or masked if medication is increased (Reynolds and Fletcher-Janzen 2009).

5.3 Eye Contact and Gaze

Inconspicuous eye contact in an interview setting is maintained in a natural, relaxed, and steady way, with a gaze that is searching without staring fixedly at the interlocutor, and with brief breaks and resumptions of contact. Eye contact and gaze are important parts of the evaluation of the rapport, and deviations may be indicative of certain kinds of psychopathology. The most important characteristics of disturbed eye contact and gaze are:

- *Avoiding eye contact*
- *Staring*
- *Paranoid headlights*
- *Scleral flash*
- *Paranoid squint*
- *Gimlet eye*
- *Shifty and unanchored gaze*
- *Parakinesia of the eye muscles*
- *Pronounced rigid parallelism of the visual axes*
- *Wearing sunglasses*

Patients with transitivistic experiences (viz., the schizophrenia spectrum) may avoid eye contact due to transitivistic anxiety or perplexity (see Sect. 5.8). *Staring* can be seen in various situations and conditions; e.g., some patients with schizophrenia can adopt a fixed gaze (in which they do not really look at the other person) to protect themselves against experiencing intimacy with others (Sass 1992b).

"*Paranoid headlights*," described by Meehl (1964), covers a set of related eye signs. "Scleral flash" is a tic-like mannerism in which the patient momentarily overwidens the palpebral fissure, showing the sclera above the iris. It is a high-speed momentary widening of the palpebral fissure chiefly by raising the upper lid but without an appreciable associated eyebrow lifting. The mannerism is sometimes followed (or, less often, preceded) by a brief narrowing of the palpebral fissure

lasting only a second or less, called *paranoid squint* (ibid.). The "*gimlet eye*" is a sharp or piercing glance. The patient's gaze has a peculiar intensity, giving the interviewer the subjective feeling that the eyes are, so to speak, "boring into or through you." This is especially typical for schizotypy if the gimlet-like gaze is persisting when the lower part of the face is in repose or smiling (ibid.).

Other disturbances of eye contact are the *shifty and unanchored glance* and the *evasive glance* in which the patient avoids eye contact by looking distractedly toward the ground, as if looking at something particular (Shea 1998). Insufficient eye contact can also be observed as increased rarity of eye movements, convergence, and fixation leading to a limited and defective visual scanning of the surroundings including the interlocutor.

Parakinesia in the eye muscles involves irregular movements of one or more of the ocular muscles.

Rather typical for schizophrenia is the *pronounced rigid parallelism of the visual axes* in which the eyes are fixed in a middle position, apparently making it difficult to move the eyes. However, only spontaneous eye movements are affected; intended eye movements are still possible but seldom occur (Sigmund and Mundt 1999).

Wearing sunglasses or toned glasses during the interview can be suggestive of transitivistic experiences in schizophrenia spectrum disorders. Similarly, some patients use the peak of their cap to regulated the eye contact, tilting it down whenever they want to avoid it.

5.4 Rapport

The rapport is a global phenomenon referring to the interviewer's evaluation of his contact with the patient. It involves features such as mimic, eye contact, affects, and reciprocity. Analyzing and describing the rapport are important, as it may reflect the patient's psychopathology including her ability to engage in natural social interaction and her understanding of the situation. Obviously, the rapport is reciprocal, and the interviewer's history, personality, etc., may affect the rapport and his evaluation of it. Important characteristics that influence the rapport include:

- *Withdrawal*
- *Shyness*
- *Distrustfulness*
- *Guardedness*
- *Hostility*
- *Aloofness*
- *One-way rapport*
- *Pseudo-open and inadequately open attitudes*
- *Inadequately open*
- *Silly, inadequate affect*
- *Indifference*
- *Anguish*

- *Anxiety*
- *Insecurity*
- *The gullible-suspicious paradox*
- *Praecox-Gefühl*

The rapport can be affected in different ways, e.g., if the patient is *withdrawn or shy*, *mistrustful*, *guarded, or hostile*. The patient can also appear *aloof,* or the rapport can be *marked by the patient's psychotic symptoms or formal thought disorders*. The interviewer can experience that the *rapport is one way* in the sense that there is no mutual adjustment to each other in the interview: only the interviewer tries to adjust to the patient. The rapport can also be *marked by anxiety or insecurity*, or the patient can come across as *pseudo-open and inadequately pushy. Silly*, *inadequate affect*, *indifference*, or *anguish* will also mark the rapport.

The gullible-suspicious paradox is described by Meehl (1964) as a combination of two traits that one would ordinarily think of as psychologically opposed, namely, gullibility and suspiciousness. The patient with schizotypy often displays a peculiar mixture of oversensitivity, suspiciousness, or mistrust in some situations with a naive and childlike gullibility such that he is readily "kidded" or "taken in," which would be obvious to most people of his intelligence and social experience. The gullible-suspicious paradox is opposed to the unequivocal paranoid attitude of the paranoic. This paradox seems explicable by loss of common sense, here as a difficulty in finding a proper level of confidence. This example is from our clinic:

> A 23-year-old woman reported a variety of self-disorders. She described herself as suspicious, usually harboring a feeling that other people, even her friends and family, have alternative agendas, and she had difficulties trusting other people. Despite this she took out a bank loan so her boyfriend whom she had known for a few months could buy himself a car. But he left her taking the car with him and letting her pay off the loan.

The expression *Praecox-Gefühl*, "praecox feeling," or "intuitive diagnosis" was articulated by the Dutch psychiatrist Rümke (1958). He claimed that the diagnosis of schizophrenia was sometimes underpinned by an (more or less) ineffable intuition, probably based on a fundamental inaccessibility of the patient. Other psychopathologists such as Minkowski (1927), Wyrsch (1946), and Tellenbach (1968) shared this idea. They described that the characteristic and incomprehensible changes in the person with schizophrenia could be perceived by the clinician in a nonconceptual mode—a type of experience that is difficult to convey in a linguistic propositional (sentence-like) format (Parnas 2011).

Gottesman and Shields (1972) demonstrated the validity of the intuitive diagnosis in a spectacular way in their seminal Maudsley schizophrenia twin study. The study showed concordance rates among MZ- and DZ-co-twins of the schizophrenic probands to be around 50 % and 10 %, respectively. Professor Essen-Möller, a renowned Swedish expert on schizophrenia spectrum conditions, who did not otherwise participate in the study, was asked to blindly diagnose the written case stories of their sample, asking for a binary classification: within or outside the schizophrenia spectrum? Essen-Möller's schizophrenia spectrum cases demonstrated for MZ a

concordance rate of approximately 90%, without inflating the corresponding DZ concordance. Gottesman and Shields concluded that it was the most successful attempt of validation of the schizophrenia spectrum concept. However, Essen-Möller was not able to explicate his diagnostic performance in a descriptive, symptom-list manner. His performance was, most likely, an instance of Gestalt or pattern recognition (see Sects. 3.1 and 3.2), executed by an extremely skilled and knowledgeable clinician (Parnas 2011).

In time, the concept of praecox-Gefühl became trivialized into a notion of "instant" or "first 3 minutes" diagnosis. However, that does not cancel its clinical reality or its conceptual importance for schizophrenia research, but there are some essentials for the Praecox-Gefühl: The intuition arises mainly passively; it cannot be instigated at will. It need not be restricted to the first minutes of the encounter with the patient but may arise at any moment throughout the interview. It may arise seemingly unprovoked or may be provoked by a single gesture, a facial expression, or something uttered by the patient, something that changes the entire apprehension of the patient because it changes the significance of the perceived Gestalt. What the clinician senses in a nonconceptual way is autism (see Sect. 8.3) (ibid.).

In an ordinary diagnostic situation, Gestalt recognition is supported by the symptom-/sign-based information. The passively experienced intuitive diagnostic hunch was never intended to more than a guidance for the clinician in distinguishing between schizophrenia and other types of psychosis and certainly not to be used as an operationalized criterion (ibid.).

In general, the interviewer should suspect autism when the patient seems to lack an adjusted emotional-cognitive cohesion with the interviewer and a disharmony is present in the atmosphere between the interviewee and the interviewer. The interviewer gets the impression that the patient is living in a completely different frame.

5.5 Mood

"Mood (Stimmung) constitutes a sense of being part of a world that is pre-subjective and pre-objective. All 'states of mind' and all perceptions and cognitions of 'external' things presuppose this background sense of belonging to a world" (Ratcliffe 2013, p.1–2). Mood is like an atmosphere or a tonality accompanying our being situated in the world without relating to anything particular, i.e., mood is objectless—it can be described as the formless background against which we live our lives (Stanghellini and Rosfort 2013). Mood is not only an "inner mental state" (e.g., "sadness") but a tonality that colors both the world and the experiencing subject, i.e., the world as a stage of possibilities or, on the contrary, as something blocked and inaccessible. Mood is also not an isolated mental object, easily dissociated from its experiential context and identified in an act of introspection (i.e., converted to a reportable symptom). We relate to ourselves and to the world through our mood (Parnas 2012b), and we are always in some kind of mood, but it can be more or less conspicuous (Ratcliffe 2013; see Sects. 6.2 and 9.1).

Some moods are characteristic for certain disorders, e.g., the *elevated*, *contagious mood* is often associated with mania, whereas the *silly mood* is more associated with hebephrenia (disorganized schizophrenia). Common mood disturbances in schizophrenia are elevated mood, depression, anxiety, and perplexity (Fish 1962) (see Sect. 5.8).

Mood can neither be evaluated as a purely objective phenomenon nor as a purely subjective phenomenon. Mood can only be evaluated through interaction with the patient; the interviewer must observe the patient throughout the interview and acquire accurate descriptions of the patient's life, activities, relations, etc. Often, relatives can provide additional information about the patient's mood. The following are examples of different moods:

- *Elevated mood*
- *Ecstasy*
- *Silly*
- *Perplexed*
- *Depressed*
- *Euphoric*
- *Dysphoria*
- *Irritability*

Depressed mood is a complex emotional state including profound resignation or lack of vital drive, anhedonia (loss of pleasure or interest), helplessness, and moral pain (Stanghellini and Rosfort 2013). Furthermore, the appearance, statements, and expressions of the patient are permeated by the depressed mood.

The patient with *elevated mood* is cheerful, with marked pressure of speech; the world is seen as full of opportunities. The patient feels great about himself and his abilities and actions. The elevated mood is most characteristically seen in mania and hypomania. Elevated mood of the hypomanic variety can be seen in schizophrenia patients, but the mood is usually not infectious, which contrasts with hypomanic/manic mood in the bipolar patient. Additionally, in schizophrenia, the mood is usually more of exaltation and ecstasy. Ecstatic states are also seen in patients with epilepsy and hysteria, but typically not associated with mania, though they can occur in mixed affective states (Fish 1962). *Ecstasy and euphoria* are heightened states of happiness. Europhoria can be observed in a wide range of mental disorders (and in normal states, as well). The characteristic of ecstasy is its self-referential structure, exemplified by statements like "the sun is shining *for me*." The schizophrenia patient afflicted with dissolution of the ego boundaries may feel "at one with the universe" (Sims 2003) or experience God communicating with her. The e*uphoric mood* typical for the acute manic state (see Sect. 11.1.1) is accompanied by hyperactivity, disinhibition, flight of ideas, and grandiose thought content or delusionlike ideas. Ideation is expansive, grandiose, and overconfident. The patient easily becomes irritated if her demands are not satisfied, sometimes evolving into open hostility and assaultive behavior (Stanghellini and Rosfort 2013).

Perplexity refers to the experience of being unable to grasp, register, or comprehend the contextually relevant meaning (Henriksen et al. 2010). It is often accompanied by feelings of confusion and anxiety and expressive manifestations such a searching, questioning look (Sigmund 2004). The schizophrenic perplexity is essentially different from delirium and the clouded state of mind in some acute psychoses referred to as "perplexity" in the DSM: unlike these states, there is no disorientation or clouding. In schizophrenia spectrum disorders, perplexity is often a reflection of common sense problems (Parnas et al. 2005b).

Dysphoria is an unstable, oppressive, burdensome, unbearable mood. The patient is sulky, unsatisfied, and morose, and irritability and agitation are common. *Irritability* manifests as the patient being uncooperative, discontented, and irritable (Wing et al. 1974b). Dysphoria can be seen in a variety of conditions, among these emotionally unstable conditions such as borderline personality disorder (see also Sect. 12.4).

Raptus melancholicus is a severe depressive state with a sudden onset, often with serious suicide attempts (see Sect. 5.10).

The term *anxiety* covers a range of experiences, moods and situational emotions (see Chaps. 6 and 10).

5.6 Affects

Affects are momentary and complex emotional processes of great intensity with apparent bodily accompaniments (Jaspers 1963), and they are focused and intentional (here understood in the phenomenological sense as directed toward an object).

Mood and affect are often confused, but they describe two distinct phenomena, the differences are discussed in Sect. 9.1 and Table 9.1. Affect also refers to the display of emotions, and it is this sense of the word, which is the subject of this section.

Certain disturbances of the affect are common in schizophrenia spectrum disorders, e.g., constricted, flat, and incongruent. In depression we also find a constriction of expressed affects due to the psychomotor inhibition, and in mania lively affects. A constriction of affect is also found in organic states.

Affects may be evaluated in terms of type, intensity, range, variability, modulation, and the degree of correspondence to the content of conversation (Trzapacz and Baker 1993). Disturbances of the affect will affect the rapport (see Sect. 5.5). In the following, some examples of disorders of affect:

- *Decrease of affect*
- *Constricted affect*
- *Flat affect*
- *Maladaptive affect*
- *Incongruent affect* (*parathymia*)
- *Anxiety*
- *Anguish*
- *Indifference*

Decrease of affect with respect to intensity, abundance, and frequency despite the ability to generate moods. The underlying mood is usually fairly steady, being joyless to joyless-morose, cheerful-serene, or cheerful-silly (Sigmund and Mundt 1999). A common distinction here is between *constricted affect* and the very pronounced cases where the affect is *flat*.

Other affects can be *maladaptive* or *incongruent* (*parathymia*), referring to an incongruity between thought content and situation, on the one hand, and emotion, on the other hand. The association between thought and affect seems to loosen and thus allows paradoxical reaction (Wimmer 1936/1995).

5.7 Speech and Language

Disorders of speech and language are basically found in two major areas of mental illness: organic states and schizophrenia spectrum. In the former area, there is a deficit of expressive language. In the two latter areas, speech disorders reflect underlying thought disorders, i.e., they are not isolated linguistic disturbances. The patient's life history, exposure to brain damage, and previous level of functioning, etc., usually make the distinction between the two areas fairly easy.

Thought disorder is a disturbance in the *form* of thinking (thus, *formal* thought disorder), not the thematic *content*. There are at least two definitions of formal thought disorders: One is very broad and counts, more or less, all disturbances of language including disturbances of the speed of thoughts, (cf. The Scale for Assessment of Thought, Language and Communication, Andreasen 1986). The other definition is conceptually narrower and includes only disturbances of the form of thought, or more precisely, of concept formation. In Sect. 5.8.1, we use the narrow definition of thought disorders. For differences between forma thought disorders in schizophrenia and schizotypy, see Sect. 8.12.

Thought disorders seen in affective illnesses are disturbances of the flow and speed of the thoughts, whereas *formal thought disorders* are more typical of schizophrenia spectrum disorders. Thought disorders span a continuum from subtle disturbances, often missed by the interviewer, to severe disturbances rendering communication impossible. Subtle thought disorders constitute one criterion of schizotypal disorder, and severe disorders, one criterion for schizophrenia (in DSM as well as ICD).

Other aspects of language production may be disturbed, as well. Sometimes there is a *loss of intonation* with a stereotypic, monotonous speech melody even when the patient is excited (Sigmund and Mundt 1999), typical for schizophrenia. Also, *mumbling* and *volume of speech* should be noticed.

The interviewer must pay close attention to the patient's language function, e.g., vocabulary, naming of items, reading, writing, comprehension, and repetitions. In order to detect such phenomena during the interview, it is necessary to attend simultaneously to both the semantic content and the linguistic form of the patient's verbal production. Such phenomena include:

- *Intonation*
- *Mumbling*
- *Volume of speech*
- *Anomia*
- *Logorrhoea*
- *Logoclonia*
- *Paraphasia*
- *Phonological paraphasia*
- *Latency of speech*
- *Thought block*
- *Poverty of speech*
- *Pressure of speech*
- *Flight of ideas*

The following phenomena are typically observed in organic conditions and are all deficits of expressive language. *Anomia* is when the patient has problems naming objects. *Logorrhoea* is an excessively strong urge to speak. Logorrheic speech itself may be coherent and logical. The speech production may be accelerated, and communication with the patient is hindered. The patient is either not able to recognize that he is being interrupted or simply ignores such interruptions. *Logoclonia* is meaningless repetition of the last syllables of a word, most often seen in organic disorders, e.g., dementia.

Paraphasia refers to the production of unintended syllables, words, or phrases during effort to speak (Goodglass and Kaplan 1983). The speaker may or may not recognize his error and attempt to correct it, e.g., "spoon" instead of "fork" (here, a word is replaced with another word from the same category) (Kircher et al. 2014). *Phonological paraphasia* is mispronunciation (with regard to phonetic articulation) of a word e.g., "lelephone" instead of "telephone" (the initial sound is replaced with a sound freom late in the word). Milder forms may occur as "slips of the tongue" in everyday speech. The speaker usually recognizes his error and may attempt to correct it. Paraphasia is seen in organic disorders and dissociative or conversion disorders, e.g., Ganser's syndrome (see Sect. 7.5.1) and in schizophrenia.

Latency refers to a prolonged time interval from when the patient is asked a question or asked to do something until the patient does it or answers the question (latency of speech). Latency can be a part of general psychomotor retardation as seen in depression, and in this situation, the latency will be consistent throughout the interview. Latency can also be seen when the patient is asked an emotionally difficult question or the guarded patient can answer with latency; in these cases, the latency will be limited to specific situations.

Thought block (Sperrung) refers to the observable phenomenon in which the patient suddenly and unexplainably stops talking for a period of seconds to a few minutes and then resumes talking again. Sometimes the patient will continue from where she stopped but more often loses the thread and is likely to ask, "where were we?" Often, the patient experiences a complete interruption of thoughts (subjective

thought block, a self-disorder; see Sect. 8.3), explaining the expressive phenomenon. Thought block happens in organic states and in schizophrenia spectrum disorders.

Poverty of speech/alogia is a grossly reduced output of speech believed to reflect a poverty of thoughts (Bleuler 1911). There is restriction in the amount of spontaneous speech, and replies to questions tend to be brief and unelaborated. Andreasen (1986) offers the following example:

Interviewer (I): Do you think there's a lot of corruption in government?
Patient (P): Yeah, seem to be
I: Do you think Haldeman and Erlichman and Mithell have been fairly treated?
P: I don't know
I: Were you working at all before you came to the hospital?
P: No
I: What kind of jobs have you had in the past?
P: Oh some janitor jobs, painting
I: What kind of work do you do?
P: I don't. I don't like any kind of work. That's silly
I: How far did you go in school?
P: I'm still in the 11th grade
I: How old are you?
P: Eighteen

Pressure of speech is an increased speed of the flow of speech. It can be difficult to interrupt the patient. In *flight of ideas*, the patient is very talkative and does not adhere to the topic of conversation. There is a logical coherence between the ideas, but the goal of thinking is not maintained for long. The associations are formed normally, but the process of forming such associations is grossly accelerated (Sims 2003). The affect influences the speed of thinking, and flight of ideas is typical for the manic state. This is an example of flight of ideas from our clinic:

Interviewer: "Why were you admitted to the psychiatric ward?"
Patient: "I went to see my doctor in Frederiksberg (a neighborhood in Copenhagen), please notice how I pronounce 'Frederiksberg', it is because I'm a true native of this neighborhood. You can also hear it in my pronunciation when I say 'Amager' (another neighborhood of Copenhagen). Amager was the place where the Dutch merchants arrived in Copenhagen (referring to the Dutch immigration to Copenhagen in the 16th century). If they wanted to go and sell their goods in the city center they had to pay toll. Then the toll-bar went up and one entered either by wagon, on horseback or walking. One could walk like Soeren Kierkegaard. He always walked in a peculiar way wearing a hat – he was depicted in *Cosaren*. Do you know the *Cosaren*?…" (Cosaren was a nineteenth-century Danish satire magazine)

5.7.1 Formal Thought Disorders

Formal thought disorders are a heterogeneous group of phenomena. Formal thought disorders refer to a change in the form of thinking (see the introduction of Sect. 5.8).

In general, formal thought disorders manifest themselves most conspicuously during unstructured conversation in which the patient has a free hand and plenty of time to elaborate her thoughts and ideas in her own way. Moreover, formal thought disorders may flare up if the topic of conversation is emotionally charged or touches on the patient's deepest personal convictions of political, metaphysical, religious, or spiritual nature.

Traditionally in psychiatry, pathology of thinking has been described in relation to the dichotomy of concrete vs. abstract thinking. Concrete thinking is bound to the given situation or object in its particular uniqueness. In the abstract attitude, a given thing represents a random example that is representative of a category (Ostergaard 1963). To keep the discussion in this chapter simple, we will predominantly stick to this dichotomy. A more coherent and complex model of formal thought disorders has been put forward by Østergaard (1963). The model is based on the developmental psychological theory and has three levels of thinking: the abstract level, the concrete level, and the vague level. The vague level is characterized by *pars pro toto* thinking (see later in this section), the concrete level by object-bound thinking, and the abstract level is "characterized by the ability to form generalizations proper" (Ostergaard 1963).

The formal thought disorders are interrelated and sometimes mutually implicative, e.g., vagueness can lead to tangentiality, which in turn can give rise to metonymies. The structure we have imposed in the following should merely serve as guidance for the reader and is not intended to present "true" entities. For a summary of formal thought disorders (see Table 5.2). We have grouped the formal thought disorders into four categories: disorganization, autistic logic, semantic disturbances, and other disturbances. In each of these four groups, we have listed the following disturbances.

- *Disorganization*
  - *Vagueness*
  - *Derailment*
  - *Tangentiality*
  - *Vorbeireden*
  - *Zerfahrenheit*
  - *Incoherence*
  - *Thought block*
  - *Severely muddled speech*
- *Semantic disturbances*
  - *Metonymies*
  - *Dedifferentiation*
  - *Agglutination*
  - *Concretism*
  - *Bizarre concreteness*
  - *Neologisms*
  - *Ideational perseveration*
  - *Symbolism*

Table 5.2 Summary of the most important formal thought disorders

1. Disorganization	Vagueness	Lack of term focus
	Derailment	Jump between Speech sequences
	Tangentiality	Deviation from the topic
	Zerfahrenheit (incoherence)	Loss of internal or external connection of the chain of ideas
2. Semantic disturbances	Metonymies	Using existing words in a private way
	Neologisms	Creation of new words
	Symbolism	Using symbols in a private way
	Dedifferentiation	Failure in differentiating closely related words
	Agglutination	Loss of meaning of a word
	Concretism	Loss or instability of the metaphorical level
	Paragrammatism	Grammatical deformation of sentences
	Paralogical omissions	Omitting a necessary logic link
	Paralogical condensations	Fusion of irreconcilable elements
	Paralogical associations	Incorrect ranging of sentences
3. Autistic logic		Private idiosyncratic logic
4. Other disturbances	Pars pro toto	A single aspect determines the whole field
	Syncretism	Too loose conceptual framework
	Ideational perseveration	Spontaneous repetition
	Circumstantiality	Failure to differentiate figure/ground
	Clanging	Acoustic qualities directing the flow of speech

  - *Paragrammatism*
  - *Paralogical omissions*
  - *Paralogical condensations*
  - *Paralogical associations*
- *Autistic logic*
  - *Assumed mutual knowledge*
  - *Cognitive slippage*
- *Other formal thought disorders*
  - *Syncretism*
  - *Pars pro toto*
  - *Circumstantiality*
  - *Ideational perseveration*
  - *Clanging*

5.7.1.1 Disorganization

In disorganization, the conceptual boundaries become fuzzy with a tendency to combine distant elements that have little in common. The frame of reference or perspective is shifting inappropriately—this is not to be confused with a simple

failure to stay focused on a particular topic or theme. The ideas expressed during a discourse should remain interconnected within the same appropriate conceptual framework and, e.g., when discussing what to eat for dinner not suddenly pass on to the eucharistic mystery, i.e., from the concrete to the abstract level. Bleuler gives several examples of "associational disturbances" and among these the following from a patient's letter: "The mountains which are outlined in the swellings of the oxygen are beautiful," demonstrating an inconsistency in using the chemical term, oxygen, in a landscape description instead of, say, "fresh air" (Bleuler 1950). In an empirical study, Holzman et al. (1986) characterize schizophrenic thought disorders as "confused and fluid, and usually peppered with many idiosyncratic and peculiar words and phrases." Manic thought disorders, they say, are of a different character, revealing "both prominent combinatory thinking and intrusions of irrelevant ideas into the stream of discourse, usually with flippancy and humor" (Holzman et al. 1986; see also Sect. 11.1.4).

Vagueness is characterized by a lack of sharp conceptual boundaries leading to a lack of clarity in speech. Despite a normal "speech production," the patient conveys very little definite information during the interview (Andreasen 1986), and it may be almost impossible to summarize in writing the content of such an interview.

In *derailment* (or digression), there is a gradual or sudden deviation from the train of thought without any gap. In milder cases, there is a slippage of ideas further and further from the point of a discussion. A severe example of derailment is:

> I think someone's infiltrated my copies of the cases. We've got to case the joint. I don't believe in joints, but they do hold your body together. (Saks 2012)

The transitions between thought sequences may be oblique and slightly beside the point in *tangentiality*. Talking past the point (*Vorbeireden*) occurs in hysterical pseudodementia, also called Ganser's syndrome (see Sect. 7.5.1), and in schizophrenia (Fish 2007). In contrast to schizophrenia, the consciousness is often not clear in Ganser's syndrome.

Zerfahrenheit (*thought distortion*) was introduced by Kraepelin describing special types of disturbances with very characteristic features, defined as "loss of internal or external connection of the chain of ideas." This form of incoherent thinking is a mixture of (i) loss of the goal of thought, (ii) disturbances in the anticipatory structure, (iii) disturbances in the ability to activate more than one idea simultaneously, (iv) disturbances in the ability of suppress irrelevant aspects of the occurring ideas, and (v) the appearance of completely heterogeneous ideas. Traditionally, in German-speaking countries, the term "Zerfahrenheit" has been reserved for schizophrenia, whereas "incoherence" was used in organic conditions (Sass 1992a). *Incoherence* is the inability to express oneself in a clear and easily understandable way. The speech is not logical or well organized, the sentences are not grammatically correct, and in its extreme form, the speech becomes "word salad." Berner et al. provide a very broad definition of incoherence: they group *thought blocking* (sudden cessation in the train of thought and, after a gap, the previous thought may or may not be taken up again), derailment, and pathologically *muddled speech*

(fluent speech, for the most part syntactically correct, but the elements of different thoughts which, for the patient, may belong to a common idea, get muddled together) (Berner et al. 1992a). Notably, the Vienna Research Criteria for schizophrenia (Berner et al. 1992a) consist *exclusively* of the items *incoherence* and *neologisms*.

Flight of ideas is a precursor of Zerfahrenheit consisting of excited thinking sustained by a strong or enthusiastic affect. Flight of ideas can become so intense that a meaningful connection between the single association can hardly be detected by the observer (for an example, see Sect. 5.7). Thinking in the state of Zerfahrenheit has lost the rational ties between the associations. The single elements can be fragmented into very small units, resulting in "word salad" (Sass 1992a). The disturbance may only appear in certain parts of the conversation; however, it usually intensifies as the conversation continues (Sigmund 2004). Zerfahrenheit is characterized by the above-described mixture of disturbances, but the articulation of heterogeneous ideas is essential for *Zerfahrenheit*. Flight of ideas can be seen in mania, schizophrenia, and other psychoses. For some psychiatrists, "Zerfahrenheit" implies a nosological decision of schizophrenia, whereas "incoherence" is nosologically neutral (Sass 1992a).

Semantic Disturbances

These are disorders of meaning/reference in which there is a private, idiosyncratic use of existing words or terms, metaphors are used in an excessively concrete or abstract manner, and the use of symbols is exaggerated. This is not a behavior that the patient voluntary seeks out, and he usually lacks notice of it himself—this is in contrast to creative/poetic violations of language rules (Parnas et al. 2005a).

Alteration in the range of meaning of terms can exhibit a decomposition to the literal core meaning of terms, a *dedifferentiation* of closely related terms and *agglutination* of a single peripheral meaning of the term, or a complete loss of meaning with reduction to a meaning of the most general nature. Sigmund and Mundt give this example of melting a term down to its literal core: only understanding the term "head" (Sigmund and Mundt 1999) as the physical head and not in other senses of the word, e.g., "head of family" and "letter head," etc. An example of agglutination could be only to understand the term "hot" as meaning "good looking." The dedifferentiation of related terms results in a restricted vocabulary, and a single term is used to cover a wide range of meaning, leading to vague and general statements, e.g., "good," "bad," (ibid.).

Concretism is a loss or instability of the metaphorical level, where everything is understood in the figurative sense. In organic disorders, the concreteness is stable, so that the patient will always remain at the concrete level, whereas what is typical for concretism in schizophrenia is sudden and peculiar shifts in the abstraction level, also known as *bizarre concreteness*, the form of concreteness that reflects a sudden and peculiar failure in the level of abstraction. An example of bizarre concreteness is this explanation by a patient suffering from schizophrenia of the proverb "don't cry over spilled milk":

> For instance if my boyfriend just left me: well, no need to cry over spilled milk—also because you can always pour another glass of milk

The explanation starts out on an abstract level, but in the middle of the explanation, there is a shift to a concrete level.

Another example of shift in abstraction level provided by a patient who was asked to explain three different proverbs, two of which were explained at an acceptable abstract level, but the third proverb (a burnt child dreads the fire) was explained in the following concrete way:

> If one has burned oneself then one will be afraid of fire

Metonymies are private, idiosyncratic uses of existing words or terms.

> A patient describes how she understands the social norms in the society. She says that children are wild and behave inappropriately because they haven't been trained yet

Here she uses 'trained' in the meaning of 'raised'. What she means is perfectly understandable but her choice of word is unconventional.

Neologisms are the formation of new words, which can either be made from existing words or can lack recognizable words. Neologisms occur as condensed expressions in which several elements are fused into one private expression. Neologisms constitute a continuum from more benign creative fusions (like the portmanteau words of Lewis Caroll and James Joyce) to ununderstandable private expressions. Berner et al. describe "cryptic neologisms" that cannot be sensibly explained by the patient (Berner et al. 1992b).

> A patient complained about receiving "thoughtmail". The patient was experiencing thought insertion and used the term "thoughtmail" to describe the inserted thoughts.

In *ideational perseveration*, words or phrases spontaneously recur. Ideational perseveration must be distinguished from verbigeration (see Sect. 5.3.1).

Symbolism is the use of symbols in a private way, often in a concrete way. Fish gives the following example:

> A patient said "I hear a stork clapping in my body", by which she meant that she believed that she was pregnant (Fish 1962).

Paragrammatism is deformation of the grammatical construction of sentences by false application of grammatical rules, e.g., conjunction of adjectives, e.g., "the baddest." *Paralogical omissions* involve omitting one or more links necessary for the logic link; a part of a thought in the mainstream drops out so that the stream of thought is interrupted (Fish 1962):

> I and what is also so comic, consequently the nun has not known me any more (ibid.)

In *paralogic condensation* (fusion), there is blending together of heterogeneous elements of speech into one senseless unity; elements are condensed into one (Fish 1962).

> As soon as the skull has gone smash and one still has flowers with difficulty (ibid.)

Paralogical associations replace "thus," "therefore," "because," etc., by a simple and incorrect ranging, e.g., by "and," e.g., "there was no more cake and they had eaten it all." Another kind of paralogical association is creating a causal relationship between independent events. Sigmund describes a patient who causally related his decreasing social life to a minor surgery that was performed a few years ago (Sigmund 2004). In parataxis, seen in mania, there is also a loss of subordination of clauses but they are ranged correctly (see also Sect. 11.1.1).

Autistic Logic

Autistic logic can manifest in different ways, all exhibiting subtle flaws of logic. It involves arbitrary and disorganized thinking (Holzman et al. 1986) such as combining two distant, barely related themes on the basis of a single, inessential element as described above. This kind of thinking is suggestive of disturbances in the intersubjective attunement. To give an example, in a normal conversation, there are areas essential to describe or explain in order for the other to comprehend the issue and other areas that are presupposed. In autistic logic, there is a shift in what can be taken for granted as shared background knowledge and what cannot.

Another demonstration of autistic logic is the patient who takes for granted that the other already have all background information and leave out the deictic coordinates of speech ("deixis" mean pointing to). Examples of deitic coordinates are the spatial, temporal, and personal (Parnas et al. 2005a). In this example, from our clinic, there is a total lack of deictic coordinates:

> A patient told that she had been stood up the day before. She explained that she had invited a young man to tea by writing a note saying: "Tea for two?" and put it in a mailbox. The note did not say whom it was for, whom it was from, and did not give the date, time or place.

Similarly, taking it for granted that all background information is somehow available to the listener is what Meehl calls "*assumed mutual knowledge*": "The patient refers to episodes or persons without explaining or narrating what would be essential for the listener to understand his discourse, as if somehow you must already know" (Meehl 1964). It is an aspect of the phenomenon "*cognitive slippage*," which is a somewhat vague but nonetheless important phenomenon, especially in schizotypal conditions. Meehl describes that "a person with cognitive slippage is unusually aberrated in regard to how accurately he *perceives* and *thinks about* reality" (Meehl 1964). *Cognitive slippage* can manifest itself in various ways, several of which are mostly subjective and will therefore not be described here. Meehl gives this example of "*assumed mutual knowledge*"—a patient saying: "So of course I connected this up with the check-book fracas," not having told you anything about the "check-book fracas" (Meehl 1964) and continuing his discourse without clarifying this phrase. It is important to distinguish between "assumed mutual knowledge" and mere carelessness or forgetfulness. A possible way to understand this phenomenon is that the patient is so absorbed in the objects of interest that it does not cross his mind that others could be so ignorant and not to know these things (related to loss of common sense and solipsistic experiences; see Sect. 8.3).

Other Formal Thought Disorders

This category contains different thought disorders that do not seem to belong to any of the three other categories expounded above.

Syncretism is overinclusion involving too general and overly wide conceptualizations, combining different and often seemingly contradictory elements, so that almost anything can be included. The patient cannot maintain the boundaries of the categories (Fish 1962). Syncretism is related to vagueness; the following is an example of syncretism:

> A patient was asked: "what is the similarity between a fly and a tree?" and the patient answered: "both of them live in the air".

Pars pro toto is Latin for "a part (taken) for the whole," meaning that a single aspect of an object or a situation may be representative of and determine the whole field (Ostergaard 1963). The patient connects two or more subjects on a basis that usually is not sufficient to connect them (Hemmingsen et al. 2002). Here, we present an example of pars pro toto:

> A schizophrenic man, travelling in a foreign country, went into a store to buy something. The salesman had bowed his tie with the same knot as the patient's father used to do. This made the patient question whether the salesman was actually his father.

Circumstantiality refers to the slow stream of thoughts due to a defect of intellectual grasp or a failure of differentiation of the figure/ground. A clear separation of the figure from the ground is not possible. This phenomenon is seen in the schizophrenia spectrum, in epilepsy, in other organic states, and in mental retardation (Sims 2003). In organic conditions, circumstantiality is stably concrete, without perspectival shifts or semantic peculiarities (Parnas et al. 2005a).

The term *perseveration* means repetition of words, phrases, gestures, and acts. It seems to cover three different clinical types (Freeman and Gathercole 1966): (i) *compulsive repetition*, where an act is repeated until another stimulus is introduced; (ii) *impairment of switching*, where the patient will follow an instruction to do something and then continue to repeat it even though another stimulus is introduced; and (iii) *ideational perseveration*, where words or phrases recur spontaneously.

Freeman and Gathercole (1966) conducted a study in which they compared a group of patients who suffered from schizophrenia with a group of patients suffering from organic dementia to determine the extent of similarities and differences in perseveration in the two groups. They found no differences in the level of perseveration as a whole, but when they divided the subjects into the three subtypes, then *compulsive repetition* is more frequent in patients with schizophrenia than in the demented, whereas *impairment of switching* is more frequent in the demented. Furthermore, they did not find any differences between the patients with dementia and schizophrenia in the level of ideational perseveration (Freeman and Gathercole 1966).

In *clanging*, the flow of speech is directed by acoustic qualities. Clanging is seen in schizophrenia and mania. Sass gives the following example:

> A patient was asked to identify the hue of a color chip and responded: "Looks like clay. Sounds like gray. Take you on a roll in the hay. Hay day. May day. Help." (Sass 1992b)

One of our patients said:

> …I went to see my mentor. I call my self a tormentor.

5.8 Cognition

Cognition is an umbrella term for the mental functions and processes that constitute thinking. Here, we are concerned with particular aspects that are expressive of cognitive difficulties. The disturbances will often become apparent through the interview; more detailed identification of the patient's difficulties can be achieved by means of various neuropsychological tests. The following phenomena are included in this section:

- *Attention*
- *Orientation*
- *Intelligence*
- *Memory*
- *Confabulation*
- *Distractibility*
- *Retardation* (*inhibition*)
- *Clouding of consciouness*

There are several functions of *attention*: (i) the ability to focus attention, (ii) the tenacity of attention, and (iii) the ability to shift focus, intensity, and extension. Attention can be disturbed in several conditions, especially in organic disorders, e.g., delirious states in which the consciousness is not clear. Psychotic conditions can also lead to attentional difficulties, e.g., by auditory hallucinations occupying a part of the attentional field (Hemmingsen et al. 2002). Attentional deficits are also seen in ADHD and anxiety and affective disorders. When a subject shows difficulties in the tenacity of attention, but is constantly distracted by noise from next door or from outside, it is referred to as *Distractibility*. The events are immediately incorporated in the conversation or disturb the interview-(Wing et al. 1974b). This is typical for the manic thinking (Sims 2003) but also common for other conditions, e.g., schizophrenia.

The degree of *orientation* is indicative of the patient's memory and clarity of consciousness. The orientation can roughly be examined by asking for time, place and person, the name of the president or prime minister, etc. Disorientation is typical of organic disorders. *Clouding of consciouness*, describes a conditon of reduces

clarity of awareness of the environment, with reduced ability to focus, sustain, or shift attention. Also the coherence of thought is affected. Clouding of consciousness is the main feature of delirium.

During an interview with a patient, one often acquires a fair impression of the patient's level of *intelligence*, but this impression can be confounded by other problems, e.g., attentional issues. IQ can be assessed by various tests.

Memory can be divided into short-term and the long-term memory. Working memory is related to short-term memory, but the term is ambiguous, as it seems to cover at least three different meanings (Cowan 2008). Short-term memory is retained for 15-30 seconds unless it is rehearsed and the storage capacity is limited (Sims 2003). Long-term memory allows for recall of event from the past and for the utilization of information previously learned. Sims (2003) describes the long-term memory with five functions: (1) registration (capacity to add new material); (2) retention (the ability to store knowledge); (3) retrieval (capacity to obtain stored material from the memory); (4) recall (the return of stored information into consciousness); and (5) recognition (the sense of familiarity which accompanies the returned material). Impairment can occur in all of these areas.

Memory disturbances can be separated into those that are psychogenic (also occurring in healthy people) and those that are of organic origin. The amnestic syndrome, a disorder characterized by systematic and extensive loss of long-term memory, can be caused by head injury, alcohol, drugs, or other organic noxae (e.g., the Korsakoff syndrome related to Wernicke's encephalopathy). Psychogenic amnesia is a sudden amnesia occurring during periods of extreme psychotrauma. In dementia there is rarely a sharp demarcation between the impairment of short- and long-term memory as is seen in amnesias.

Confabulation manifests itself as the filling-in of gaps in memory by imagined or untrue experiences that have no basis in facts. Patients' have a clear consciousness in association with organic pathology, e.g., Wernicke-Korsakoff syndrome (Fish 2007).

In *retardation* (*or inhibition*), the thinking proceeds quite slowly. The patients often show little initiative and spontaneous activity. Retardation is seen in depression (Sims 2003) and in organic states such as slow cerebration in eating disorders due to insufficient nutrition.

5.9 Self-Harm and Suicidal Behavior

Self-harm and suicidal behavior are central phenomena in psychiatry and are the source of preoccupation for psychiatrists, the staff, and the families (Ey 2006). This covers a wide range of behavior, and the distinction between the two is often only possible by having the patient explain about her intention with the act. Dangerous behavior is not necessarily indicative of a wish to die or harm oneself, but can, for example, be a response to psychotic experiences.

Suicide is often carried out with quite basic resources, and the choice of method is, to some degree, gender related: males tend to use more violent methods than females. Self-mutilation using physical acts such as shooting, hanging, or wrist slashing probably demonstrates a different psychopathology from self-poisoning (Sims 2003). Bizarre methods such as setting one's hair on fire or dissecting blood vessels in one's own thigh are highly suggestive of psychosis, especially schizophrenia, as it can reflect elements of common sense issues (see Sect. 8.1). The patient who is in a state of intense anxiety may try to commit suicide repeatedly in grotesque ways (Ey 2006).

Self-harm and suicidal behavior are seen in many conditions, most common in affective disorders, severe anxiety, delirious state, and psychosis.

Ey (2006) describes what he calls "the pathological suicide" and separates the suicides into three groups:

1. The suicidal raptus: A self-destructive impulsion that suddenly appears, a sort of a compelling need to die, e.g., jumping abruptly out of a window. A suicidal raptus can be seen in melancholia, schizophrenia, alcohol and drug abuse, epilepsy, and dementia. In schizophrenia, the raptus is often not understandable and is executed in a slow and bizarre way. Ey (ibid.) gives the following example:

   > A patient suffering from schizophrenia killed himself by progressively cutting himself in the chest with a breadknife until he reached his heart.

2. The secondary impulsive suicide: This action is secondary to an intense anxiety that gives rise to disturbances in the patient's consciousness. The actions are related to ideas of catastrophe, delusional notions, and hopelessness. It is seen in melancholia, psychosis, schizophrenia, and in organic disorders such as dementia and delirium. The secondary impulsive suicide can also be manifested as the extended suicide, in which a melancholic patient kills his family and himself. In patients with schizophrenia, the extreme anxiety that triggers an impulsive suicide can be based on delusions, typically of persecutory or hypochondriac character. Here, we observe a sharp contrast between the autistic attitude (the apparent shallow indifference) (see Sect. 8.2) and the violent act (the profound impulsions). Systematized delusions can also trigger a suicide committed as a defense against the persecutors. The following example could be of this kind:

   > A man in his mid-thirties was admitted to a psychiatric unit in a psychotic condition. Less than an hour later he committed suicide by strangulation. Just before this action he had called his wife and children and warned them that the persecutors were coming. He told them to escape immediately.

Yet, another instance of the secondary impulsive suicide is "the psychoneurotic suicidal imbalance": This indicates an obsessive-compulsive suicidality—the patient is in a (Freudian) conflict between committing suicide or not committing suicide. Generally, this kind of patient does not go through with the act, but when

they do commit suicide, Ey calls it "a paradoxical act," carried out under strong influence from the subconscious. Furthermore, Ey mentions "the hereditary suicide," which is also a manifestation of the psychoneurotic suicidal imbalance; an example is the man who commits suicide at the same age as his father and his brother committed suicide (Ibid.).

3. The suicidal psychotic reaction: According to Ey, there can be found a delirious/psychotic component in all instances of suicide. This type of suicide is a direct consequence of delusions, e.g., the sacrifice of one's life by self-castration or the crucification of oneself in accordance with the rules of a cosmic myth. The following example is of this kind:

> A young man went to the zoo and jumped right into the bear grotto creating huge drama. He was brought out alive, only with some minor bruises. Later, at the hospital, he explained that he had recently become a vegetarian and he wanted to apologize to the bears for his previous meat-eating behavior.

Finally, Ey discusses bizarre suicides, which, according to that researcher, demonstrate the patient's alienation (see Sects. 8.2 and 8.5). Ey (2006) gives the following example:

> A hospitalized female set her clothes on fire and lay down in bed under her blanket. The nurse found the patient's facial expression peculiar and lifted the blanket: the clothes were still burning but the patient did not show any signs of being in pain.

Some psychotic patients persistently attempt suicide in an automatic or stereotyped manner, both in the way the patient "stubbornly" continues to attempt suicide day after day, in the choice of method (e.g., a man squeezing his hand around his neck while laying in bed), and in the apparent absence of an emotionally adequate reason for the behavior (Wimmer 1936/1995). The following is an example of this kind of behavior:

> A woman was admitted for the first time to a psychiatric facility, she was psychotic and had tried to commit suicide. In the unit she repeatedly tried to strangulate herself in strange ways. She did not express a clear wish to die nor could she describe voices commanding her to do so. Nonetheless, the behavior continued almost daily sometimes several times a day. The condition did not respond to antipsychotic medication. On the suspicion of catatonia (manneristic behavior) she was then treated with electroconvulsive therapy with excellent effect.

Pathological self-mutilation appears as a nonspecific symptom as well as a specific syndrome. Psychotic patients might commit extreme self-mutilation such as enucleation of an eye or amputation of a limb. Stereotypical self-mutilation such as banging and biting off of fingertips is typically seen in mental retardation. Skin cutting and burning is the most common type of self-mutilation and is seen in personality disorders, post-traumatic stress disorder, psychosis, and in schizophrenia spectrum disorder (Favazza and Rosenthal 1990). Large and colleagues found the

catastrophic event of "major self-mutilation" to be rare. In their study, they reviewed 196 case reports that met their definition of "major self-mutilation": cases in which the patient had completely removed an eye or a testicle or severed their penis (proximal to the glans) or a limb (proximal to the hand or foot). They found that a psychotic disorder was documented in 75.6 % of the cases. 53.5 % of these had a first-episode psychosis (a substantial part of the case reports did not allow for identification of stage of the illness) (ibid.). It has been estimated that 500 cases of deliberate eye enucleation occur yearly in the United States (Favazza and Rosenthal 1990).

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Part II

The Diagnostic Spectra

Navigating Between the Spectra: Organic Disorders, Schizophrenia, Affective Disorders, Personality Disorders, and Situational Problems

6

Abstract

Psychiatric diseases constitute spectra of related conditions sharing the same fundamental structure, a core Gestalt of experiential and behavioral phenomena: autism in schizophrenia, altered temporal structure (bound up with motor disorders) in affective disorders, etc., and characteristic life-historical patterns. The recognizable Gestalts allow prototypical diagnoses to be made. The demarcation of the individual diagnosis is arbitrarily determined by the criterial algorithm of the diagnostic system. The diagnostic criteria consist of conspicuous signs and symptoms suitable for reliable recognition. The diagnostic entities thus formed are syndromes or symptom clusters mostly of doubtful validity. Higher degrees of validity can be achieved by identifying their underlying spectrum affiliation.

Symptoms of a given mental disorder bear the impress of the core Gestalt as a specific quality. Thus, derealization in schizophrenia differs from the melancholic type. These qualitative differences must be assessed in their specific context, which is lost in a structured interview; diagnostic and psychopathological tools should rather be used as checklists in a semi-structured way.

Comorbidity refers, originally, to the coexistence of two or more independent disease entities, which is rarely the case for psychiatric diagnoses. Here, comorbidity can usually be accounted for by the splitting up of syndromes into isolated symptoms.

The following Chaps. 7, 8, 9, 10, 11, 12, and 13 will examine the individual diagnostic spectra and the differential diagnoses of importance.

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In this chapter, we will explore the basic principles of differential diagnosis. Before considering these principles, we must examine the nature of the diagnostic entities themselves. The psychiatric diagnoses as depicted in the diagnostic manuals are rarely well-validated nosological entities, but rather arbitrary, nominalistically defined clusters of symptom and signs, or syndromes of unknown validity. Their definitions in the DSM and ICD are based on expert consensus rather than on empirical evidence. As an illustration of the arbitrary character of psychiatric diagnoses, a review has demonstrated the existence of close to 40 different historical definitions of schizophrenia up through the twentieth century (Jansson and Parnas 2007). Whereas the validity of single diagnostic entities is often doubtful, spectra of related diagnoses, ultimately based on clinical observations across two centuries, can probably be established with higher degrees of validity.

6.1 The Process of Differential Diagnosis

6.1.1 The Prototypical Approach

Pattern recognition pertains to human cognition. We recognize objects through the "passive synthesis" (Husserl) of the different aspects of intention. Thus, we need not have to count the legs of a dog in order to identify him. This silent process also applies to making diagnoses. The experienced diagnostician recognizes the pathological patterns, the diagnostic prototype, or the ideal type (Schwartz and Wiggins 1987) – see Sect. 3.1. Psychopathological and diagnostic tools may serve as checklists to ensure that details are not overlooked, but they should never be used in a structured, algorithmic way.

Psychopathology must be viewed in its total richness of qualitative aspects in their proper contexts. All kinds of information count and add to the prototypical picture. We need a life history to get an impression of the person, the course of illness, and the specific existential style, we need the unreduced description of psychopathology and the rapport and interplay with the patient to make a valid diagnostic proposal, and only then we may have to consult the checklists to delimit our diagnosis from adjacent pathological states and avoid idiosyncrasies. The life history helps us distinguish between *trait and state* phenomena. The former designates lifelong conditions like personality disorder, ADHD, and schizotypy and the symptoms and signs related to such conditions, such as subtle thought disorder in schizotypy. The latter designates psychoses, depressions, anxiety states, etc., limited in time. There is a relation between them, as states often can be viewed as aggravation or further development of the underlying traits. Schizophrenic first-rank symptoms evolve from trait-like self-disorders and melancholic phenomena from the premorbid personality structure.

6.1.2 The Operational Approach

The operational approach in diagnostics, as described in Sect. 4.1, is bound up with polythetic definitions of mental illness. The so-called operationalization means simple, standardized definitions of signs and symptoms (and has nothing to do with operationalization in natural science, see Sect. 4.1). Here, the question of differential diagnosis tends to be reduced to the outcome of a diagnostic algorithm. In his DSM-5 handbook of differential diagnosis, First (2014) advocates the use of 29 such algorithmic decision trees, noting:

> When we are confronted with these presenting symptoms, our job is to cull from all of the myriad of conditions included in DSM-5 those that could possible account for them. (p. xiii)
>
> Once substance use and general medical conditions have been ruled out as etiologies, the next step is to determine which among the primary DSM-5 mental disorders best accounts for the presenting symptomatology. (p. 9)

However, this is at odds with how valid diagnoses are made. In Chap. 4, we saw how structured interviews fail to recognize various psychopathological phenomena and to diagnose symptom-poor cases. Symptoms have to be evaluated in the specific life-historical and psychopathological context. By simply counting the number of standardized symptoms, deprived of their specific qualities, there is a substantial risk of misdiagnosis. Symptoms of depression, to name an example, will then be indistinguishable from negative symptoms.

ICD-10 points out that the descriptions and guidelines of the manual are simply sets of symptoms and comments that have been agreed "to be a reasonable basis for defining the limits of categories in the classification of mental disorders" (p. 2). That is to say that the diagnostic criteria are by no means the final definitions of the disease entities. The prototypical recognition is presupposed as the normal clinical way of diagnosing, and the criteria just serve to delimit the disease from related entities.

6.2 Diagnostic Spectra

Clinical psychiatry has outlined spectra of related clinical states. Whereas nineteenth-century psychiatry tended to draw up lists of independent diagnostic entities, psychiatry, at least since Kahlbaum (the categories of *vesania* and *vecordia*) and Kraepelin, has attempted to group them in spectra of allied clinical conditions, first of all exemplified by the Kraepelinian dichotomy into dementia praecox, later leading to the schizophrenia spectrum, and manic-depressive illness, leading to one or more affective spectra (unipolar, bipolar). These spectra were prototypically defined from long-term observations of psychopathology, clinical course, and outcome. Bleuler's introduction of a broad spectrum of schizophrenic-like states was

based on the observation of chiefly behaviorally defined fundamental symptoms common to all these states, present in every stage of the illness, and independent of psychotic manifestations, but he still did not rule out the possibility of a number of different states ("the schizophrenias") constituting schizophrenia. In this context, diagnostic spectra should ideally be based on their common underlying pathogenetic (genetic, pathophysiological, environmental interaction, etc.) processes. In psychiatry, however, these processes are largely unknown, so the spectra have to be based on their psychopathological structure and temporal course.

Attempts have been made to outline diagnostic spectra by the aid of statistically processed information obtained by semi-structured or structured interviews and clinical observations. Factor and latent class analyses may then crystallize underlying diagnostic structures having significance for classification (cf. Kendler et al. 1998). But this approach entails a risk of overlooking psychopathological structures not covered by the instruments. Established in the 1990s, the Spectrum Project (Frank et al. 2011) aims at conceptualizing psychopathological spectra using refined structured clinical interviews (SCI) with a priori constructed lists of items also including subthreshold and atypical manifestations not present in structured interviews like the Structured Clinical Interview for DSM (SCID-5, 2014). The project operates with mood, panic-agoraphobic, substance use, psychotic, anorexia-bulimia, obsessive-compulsive, and social anxiety spectra. But in spite of the refinement carried out, most of the psychopathological features covered by the SCIs are rather nonspecific. Furthermore, the application of the spectra reflects the prevailing DSM view on comorbidity: the spectra appear as psychopathological aspects rather than groups of cognate diseases, and, therefore, two or more spectra may be assigned to the same individual, e.g., panic spectrum symptoms rated in bipolar patients (Frank et al. 2002). This approach, at odds with the spectrum as reflecting the common, underlying pathogenetic structure of a group of diseases, may contribute to the description of subgroups of a given diagnostic entity but cannot solve the question of differential diagnosis.

The search for an underlying psychopathological structure governing the pathogenesis and endowing all the clinical manifestations with a characteristic tinge is a more promising approach for the foundation of diagnostic spectra. This underlying structure is what Minkowski named the generative disorder (*trouble générateur*, 2012). In schizophrenia, it is the autism, and in melancholia and mania, the disturbed temporal structure and specific mood. The concept of the generative disorder is closely related to the *basic mood*, or ground mood (Ratcliffe 2013). "Moods constitute a sense of being part of a world that is pre-subjective and pre-objective. All 'states of mind' and all perceptions and cognitions of 'external' things presuppose this background sense of belonging to a world" (Ratcliffe 2013, referring to Heidegger). A mood is "a pervasive, pre-reflective and passively lived dimension of our being in the world" (Parnas 2012) or can be viewed as emotions bereft any clear semantic or intentional structure (Stanghellini and Rosfort 2013; see also Table 9.1). Basic (or ground) moods condition the possibility for the presence or absence of other moods (Ratcliffe 2013); they constitute the structure of the disease and are, therefore, not just limited to the so-called mood disorders but

are intrinsic parts of all mental states. Gruhle's basic mood of schizophrenia is equivalent to self-disorder (Gruhle 1929; see also Sect. 8.3), and this basic mood thus conditions the presence of, say, delusional mood. And so, schizophrenia, too, can be regarded as a "disorder of mood" (Stanghellini and Rosfort 2013). It is the mood that endows all psychopathological phenomena of a mental state with their specific quality. The psychopathology, expressivity, and behavior make up a characteristic Gestalt, which may be recognized by intuition as an "atmospheric diagnosis," exemplified by the *Praecox-Gefühl* (praecox feeling) in schizophrenia (Parnas et al. 2002; see Sect. 5.4).

The notion of the schizophrenic spectrum was introduced by Bleuler (1950) stating that the majority of cases were subclinical ones. He coined the concept of schizoidy for nonpsychotic ("latent") schizophrenia, later, under the term of schizotypy, to be explored by Rado (1953) and Meehl (1990) who outlined an advanced model of the schizophrenia spectrum spanning from subclinical, "compensated" schizotypy through clinical, "decompensated" schizotypy to schizophrenia (named "disintegrated" schizotypy). Symptom-poor types of schizophrenia have been identified, too (Raballo and Parnas 2011; see Sect. 8.6). Whether the schizophrenia spectrum represents a single etiologic entity or a number of different states with a common psychopathological structure (Bleuler's "group of schizophrenias") is not settled yet.

Kraepelin's comprehensive category of manic-depressive insanity (1921) included the modern diagnoses of bipolar disorder, unipolar, cyclothymic, and dysthymic states. In this broad sense, the affective spectrum can be seen as a whole array of affective states of varying severity and course, spanning from dysthymia, "masked" (Kielholz et al. 1981), and subclinical forms (Akiskal et al. 1997) to manifest unipolar nonpsychotic and psychotic depression and from cyclothymia to bipolar disorder. A series of subtypes of bipolar disorder beyond bipolar I and II disorders has been suggested: I½, II½, III, IV, V, and VI (Akiskal and Pinto 1999; Klerman 1987). The unification of all affective disorders has been disputed, and much evidence points to the separation of unipolar depression and bipolar disorder. As we will see, the affective disorders probably comprise several separate spectra of clinical and subclinical states. For example, depression can be subdivided into nuclear (or core) depression (related to bipolar disorder), paradepression, and pseudodepression (see Chap. 9) with different psychopathological profiles.

The existence of a third group of nonorganic psychoses is highly probable; organic states, beyond their possible focal peculiarities, may exhibit common similarities linking them together in a spectrum, and spectra of anxiety disorders, stress-related and situational disorders, and personality disorders also stand out. However, the validity of the major psychotic spectra is by far the greatest. The differential diagnostic aspects pertaining to each spectrum will be dealt with in more detail in the chapters to follow.

The spectrum notion is closely related to a dimensional approach. Categorical diagnostic systems are unsuitable for defining spectra. Nevertheless, clinicians often refer to, e.g., chapter F2 (nonorganic psychoses) of ICD-10, a categorical system, as "the schizophrenia spectrum." The classification of psychiatric diagnoses

in DSM-IV, too, is basically categorical. The hope for the fifth revision by many was the emergence of a pathophysiologically based classification, which was not fulfilled, but DSM-5 aims at clustering diagnoses in some sort of spectra of disorders regarded as (etiologically) related. Thus, Asperger's disorder has been abolished as a category and included in the broad category of autism spectrum disorders; dementia is now to be found as a variant of neurocognitive disorders; a number of categories (e.g., obsessive-compulsive disorder) are widened by the aid of severity specifiers to include near-psychotic and psychotic variants.

6.3 The Specificity of Psychopathology

Symptoms and signs are concepts originated in somatic medicine as indicators of the underlying pathological process, e.g., petechiae as an indication of serious infection, but transferred to psychiatry, their significance has changed into expressions of psychopathology itself (see Sect. 3.3). Psychiatric symptoms attain their specific psychopathological quality from the global Gestalt of the diagnostic category in question (Nordgaard et al. 2012). Schneider (1959, p. 95) emphasizes that psychosis always involves an overall change, and that the "particulars" always should be seen in their context. Pope and Lipinski (1978), find that most schizophrenic symptoms taken alone and in cross section have remarkably little validity in determining diagnosis, prognosis, or treatment response in psychosis. Unlike somatic symptoms referring to natural objects, psychiatric symptoms refer to fragments of experience, which lose their significance if detached from their context (Gorostiza and Manes 2011). This is the case for the standardized psychopathological categories listed in the structured and semi-structured diagnostic instruments such as the SCID (SCID-5 2014) and SCAN (Schedules for Clinical Assessment in Neuropsychiatry, SCAN 1999), contributing to the insufficient validity of these instruments (at least when used in a structured way; see also Chap. 4).

In distinguishing between schizophrenia and manic-depressive insanity, Minkowski writes:

> The mere enumeration of symptoms hardly leads to the goal. We reproduce here, approvingly, the opinion of Binet and Simon on the value of psychiatric symptoms. These authors found the usual description of the various mental states often confusing. You believe to have understood a disease and to be able to recognize it, but you just have to turn the page of the manual and go to the next disease to be disturbed again. It is almost the same mental state we find, "all these banal symptoms repeat themselves more or less from one disease to another, giving the distressing impression that it is always the same thing. Literature is filled with observations full of details, but useless because everything is there except the essential." — "Many authors are guilty of introducing all these cumbersome symptoms in psychiatric definitions. It becomes necessary to change the method. Synthesis must replace analysis. Some symptoms are characteristic, others are banal, or rather, in every symptom there is a banal part to be neglected and a characteristic part to remember. We must clarify the specific characteristics of each form of the symptoms studied, because *what matters most are not the symptoms but the mental state which conditions them*." In the face of Kraepelin's method, which is the 'sampling method' and has been able to create only

> 'tentative' units, we must set up another one which is, according to Binet and Simon, more specifically the method of French psychiatrists. It consists of "seeking the essential, the soul of the insane, and giving less emphasis to the background attitudes, the gestures, the words, the infinite detail." (Minkowski 2002, pp. 83–84, our translation)

Blankenburg demonstrates the specificity of apparently nonspecific phenomena (Blankenburg 1971, p. 6; Parnas and Sass 2001). A trivial (nonspecific) complaint of fatigue turns out, on more close evaluation, to be caused by a pervasive inability to grasp the everyday significations of the world and a correlated perplexity (a condition highly suggestive of schizophrenia, hence "specific").

Not only subjective pathological experiences but also expressive signs bear the characteristic impress of the Gestalt they are parts of. The agony reflected in the facial expressions of the severely depressed patient, the psychomotor inhibition in the speech latency, loss of fluency, and slowness of movements closely reflect the depressive state they are part of, and they differ widely from the postural rigidity, the poor rapport with inadequate facial expressions, and vagueness found in schizophrenia. Signs may even take on a contradictory tinge: preoccupation with one's mirror image vs. avoiding mirrors may be expressive of the same underlying pathological mirror phenomenon. DSM-5 and ICD-10 mania and depression allow mood congruence or incongruence specification of psychotic symptoms. However, this does not imply a qualitative evaluation of each separate symptom but rather a categorization by typical themes: in mania themes of grandiosity and invulnerability and in depression of personal inadequacy, guilt, disease, death, nihilism, or deserved punishment (DSM-5). This approach is similar to the one outlined by Pope and Lipinski (1978) referring to "schizophrenic" psychotic symptoms not secondary to the prevailing mood. One of their examples is ideas of reference. But as we shall see in Sect. 8.4, self-reference constitutes a whole range of different phenomena, and among these there are depressive, manic, and schizophrenic types.

The contextual specificity of psychopathology is the reason that makes the utility rather doubtful of projects attempting to validate psychopathological phenomena in isolation, like the Research Domain Criteria Project (RDoC, Cuthbert 2014). In a clinical context, the value of contextual assessment of psychopathology makes the "random sampling" approach questionable (e.g., attempting to prove or disprove a diagnosis by of the presence or absence of certain selected, characteristic symptoms).

6.4 Existential Patterns

The individual prototype of mental disorders conforms to a specific type of existence reflected in the life history, life forms (Daseinsweise). People with impulsive personality traits will have life histories informed by impulsivity, sudden changes of plans, sacking, removal, and falling out with friends and lovers, whereas people with a higher level of structure and stability will be characterized by long-term employment, stable friendships, etc. Social anxiety shows in the life history through

poverty of contact and self-isolation tendency. The course of illness, too, can be traced in the life history. A first prodromal "break" ("Knick," Kahn 1923) of the curve appears in many cases even before the emergence of salient psychopathological features. Kahn argues that in most cases, except the insidious ones, such a break of something "new" and different "befalls" the patient. In some cases, there is a shift in the "existential orientation," or an existential change (Møller and Husby 2000; Parnas et al. 2005b; see also Sect. 8.5), in direction of new interests and goals, portending the themes of upcoming delusional ideas. Here is an example from our clinic:

> At age 16 or 17 he was sensitive, anxious, and inquiring. At the library he came across a book on Buddhism, which he found very inspiring. He didn't know any Buddhists. He started meditating and thought that it was useful for him. He became intensely concerned about karma. He believed that all insects had a karma, and that he himself would get a bad karma if he killed them. He became "phlegmatic" explaining that it was in conformity with Buddhism, preaching the relinquishment of all mortal values. He lost interest in attending school, started playing hooky, staying at home, and did only complete high school because he knew that it meant so much for his parents. Buddhism implies that you give up your "ego."

Such patterns of social history alone, even in the absence of positive information of psychopathology, may give us a hint about the psychopathological prototypical Gestalt by "probabilistic," "actuary," or "actuarial" diagnosis. Compare the following cases:

1. A 27-year-old woman, a high-school graduate, who did well professionally, moved together with her boyfriend at age 20 and studied history for one term in 6 months until her first pregnancy, and after childbirth, she decided to become a student nurse. She carried through her studies and found a job as a nurse, which she attended for 2 years except for sick leave periods lasting at 3 months. She broke up with her boyfriend 2 years ago, but they are still sharing the custody of their daughter. She has some intimate friends. She has now reported herself ill due to mental problems.
2. A 29-year-old man applying for disablement pension. He has a tainted background. He had to repeat the playschool year because of school immaturity. In the fifth grade, after a school transfer, his behavior became increasingly maladjusted (e.g., involved in shoplifting), and he was referred to a community home. He had to repeat the seventh grade, too. He did some progress but failed to pass the school-leaving exam after the ninth grade. He had no close friends. After leaving school, he became a carpenter's and a locksmith's apprentice, attended sports school and adult education classes, but was unable to carry through any of these. He has had several odd jobs as a mailman, a newspaper deliverer, and a hotdog seller, all of them short-lived (less than a month). He used to be homeless but has been allotted a one-room flat. He has been deprived the control of his social security. He has a couple of acquaintances but no close friends.

Table 6.1 Explanations of schizoaffective disorder (Cheniaux et al. 2008)

1. An atypical form of schizophrenia
2. A variant of bipolar disorder
3. A comorbidity between schizophrenia and bipolar disorder
4. An independent disorder
5. A heterogeneous group of patients
6. A middle point of a continuum between schizophrenia and bipolar disorder

Case (1) is a woman of normal intelligence and organization. Her social relations and occupational skills are unaffected. Her mental illness is restricted to some well-defined episodes. The diagnosis is most likely episodic depressions. Case (2) is quite different. His primary intelligence may have been lower judged by his school performance. He is lacking in structure and perseverance. He is rather isolated, a fact inconsistent with a primary personality disorder. The overall picture is consistent with a disorganized schizophrenia spectrum disorder.

Environmental factors may provoke and in other cases protect against mental illness. Deterioration may follow loss of structure as seen when leaving school or home. The following case illustrates the protective effect of environmental structure in a case of late-onset psychosis:

> A woman in her late 50'es is admitted to a mental hospital with a severe catatonic psychosis followed by a residual state dominated by negative symptoms. Her husband's physical illness seems like a probable stressor but apparently she has never before had mental health problems. However, a careful life history reveals unnoticed signs of vulnerability. She has always been sensitive and passive, got married early, has been a housewife for most of the time and only taken a few short-lived part-time jobs in a kindergarten, has seldom been separated from her husband, and once she was, when he went on a business travel lasting a week, she was beside herself with anxiety.

6.5 Diagnostic Overlaps and Comorbidity

> If you want to distinguish between two conditions,
> look for their differences, not their similarities
> (Barroilhet et al. 2013)

The safe separation of illness categories and spectra requires a point of rareness, a gap without overlap. In terms of descriptive psychopathology, it is in reality often absent. Intermediate cases between the schizophrenic and the affective spectra led Kasanin (1933) to maintain the existence of an independent disease, the schizoaffective disorder. However, his original descriptions are not quite transparent. The existence of apparently intermediate cases may be explained in a number of different ways. Cheniaux et al. (2008) enumerate six possible explanations of the occurrence of these mixed pictures (see Table 6.1). The nature of schizoaffective disorder has not yet been settled (see also Sect. 11.3).

Atypical features constitute a special challenge for nosology and for differential diagnosis. How are we to understand, say, mood-incongruent features? The very term implies a contradiction: psychotic features cannot be entirely separated from the mood of the given psychotic state. If a depressive patient feels threatened and persecuted, this feeling is in accordance with his specific mood. The question is then whether the concept of depression can hold such a mood, or the clinical state should be reclassified. Also, there is a potential pitfall of disregarding mood-congruent aspects of apparently mood-incongruent phenomena. For example, ideas of persecution, often declared mood incongruent, may be experienced as "richly deserved" by the depressed patient as an expression of self-accusation and, therefore, actually prove truly mood congruous.

For the last 20–30 years, we have witnessed a revival of the concept of the nineteenth-century "unitary psychosis," advanced by, among others, Griesinger (Berrios and Beer 1994) who viewed different psychotic states as stages of the same illness process. The modern version, linking up schizophrenia with bipolar disorder, is motivated by, e.g., genetic findings (Cross-Disorder Group of the Psychiatric Genomics Consortium 2013), and is referred to as a case of dimensional classification. An extreme case of this view is proposed by Lake (2012) who argues that all patients with schizophrenia are in fact misdiagnosed bipolars. However, claiming that diagnostic prototypes so different should belong to the same nosological category makes little sense (Parnas 2012). The level of psychopathological sophistication has declined dramatically since the introduction of operational criteria in psychiatry, and without understanding the basic psychopathological processes of the spectra, it is impossible to distinguish between them. *Within each spectrum*, defined by its basic psychopathology, a dimensional approach makes more sense.

Comorbidity refers to any additional coexisting ailment (Feinstein 1970), having a different pathogenesis. Originally, it meant coexistence of independent disease categories like epilepsy and pneumonia, but in psychiatry, the meaning of the term seems to have changed to the co-occurrence of any clinical symptoms or syndromes (Maj 2005) even with a common pathogenesis. Maj refers to an implicit rule laid down in the construction of the DSM-III that the same symptom cannot appear in more than one disorder (cf. Robins 1994). The co-occurrence of symptoms separated by this rule may thus elicit a "comorbid" diagnosis. To give an example, anxiety has always been seen as an integral part of depression, but for the sake of algorithmic clarity, anxiety symptoms have been removed from the diagnostic algorithm of the DSM-IV, although acknowledged in the text of the manual. Depressive patients suffering from anxiety will then need a "comorbid" anxiety diagnosis.

Whereas the ICD-10 operates with a hierarchal structure coming into force in case of simultaneousness by ruling out "comorbid" diagnoses ranged lower in the hierarchy (anxiety belonging to F4 ranged below depression F3), there is no such general hierarchal rule in the DSM-IV and −5, only rules built into single diagnostic algorithms. The motivation for not introducing hierarchical rules in the DSM was to provide richer clinical description (Regier 2012). So, the DSM is a "splitter" rather than a "lumper" system (Robins 1994). As a result, we see ample use of comorbid diagnoses in the USA and a proliferative research into diagnostic combinations. DSM-IV requests multiple diagnoses:

> The general convention in DSM-IV is to allow multiple diagnoses to be assigned for those presentations that meet criteria for more than one DSM-IV disorder. (p.6)
>
> Those choosing [the multi-axial format] should follow the general rule of recording as many coexisting mental disorders, general medical conditions, and other factors as are relevant to the care and treatment of the individual. (p. 35)

In his DSM-5™ Handbook of Differential Diagnosis, First (2014, p. 12) warns against the naïve and mistaken view of comorbidity as the coexistence of multiple independent conditions, and he lists six different explanations of relations between the conditions and admits that the nature of the relationship is very often difficult to determine. Still, he defends the usefulness of the term, comorbidity, to communicate diagnostic information.

Multiple (comorbid) diagnoses may be indicative of an underlying, not yet recognized, psychopathological process. Like the Indian tale of the blind men and the elephant, each diagnosis reflects an aspect of a Gestalt that remains "invisible" for the clinician. We often run into constellations of diagnoses like social phobia, dysmorphophobia, generalized anxiety, dysthymia, and Asperger's autism, in this case indicating a probable incipient schizophrenia. This is illustrated by findings like those by Bevan Jones et al. (2012) that impairment in speech development, odd rituals, and unusual habits in autistic children predict psychotic experiences in adolescence, aspects of autism each of which could give rise to comorbid diagnoses (like OCD and developmental disorder).

6.6 The Borders of Normality

The concept of normality in mental health is ambiguous, meaning things like average, ideal, or absence of illness (Frances et al. 1991). Neither DSM-5 nor ICD-10 offers any definition of normality or health. WHO defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO 1946). These different meanings of normality and health are sometimes confused, a fact leading to misconceptions. This is also the case in fields like psychotic features in the "normal" population.

Classification systems should be able to distinguish between psychopathological phenomena of mental illness from phenomena of normal psychology. Community surveys like the Midtown Manhattan Project show that the majority have mental symptoms but the clinical relevance is uncertain (Regier 2012). Psychotic-like phenomena are said to be prevalent in the normal population. The so-called Hearing Voices Movement maintains that "voice hearing" is a normal phenomenon, yet misunderstood by psychiatric professionals who regard auditory hallucinations to be expressive of psychosis. As many as 10–15 % of the population are said to hear voices (Sommer et al. 2010). Widows and widowers are reported to have hallucinations or illusions of their dead spouses (Rees 1971). But this field is marred by methodological difficulties.

Some demographic studies have lay interviewers perform telephone interviews or administer self-rating scales, resulting in data of low validity and reliability. A thorough analysis of patients with schizophrenia compared with healthy students conforming to having experienced psychotic-like phenomena using a self-rating scale revealed that they were really describing quite different phenomena (Stanghellini et al. 2012):

> E.g., to the prompt "When I look at things they appear strange to me", the schizophrenic patients responded with description of the experience of derealization: "When looking at people, they sometimes seem strange, like they're not real, and the things in the house too", whereas the healthy students described experiences related to attention or reflection: "After observing the faces of people for a long time, I see them differently. What I mean is that they are not the way I thought they were before."

And on the other hand, there seem to be many subclinical non-patient cases actually experiencing near-psychotic phenomena. Some of these may be characterized as "compensated schizotypy" (Rado 1953), mild cases who seldom seek help and who have a relatively high level of functioning. Population studies have found prevalence rates of schizotypy up to 3–4 % (or more) (Parnas et al. 2005a). Sommer et al. (2010), examining voice hearers, found that "the individuals with AVH [auditory verbal hallucinations] did not have clinically defined delusions, disorganization, or negative or catatonic symptoms, nor did they meet criteria for cluster A personality disorder. However, their global level of functioning was lower than in the controls and there was a pronounced increase on all subclusters of the Schizotypal Personality Questionnaire (SPQ) and the Peters Delusion Inventory, indicating a general increased schizotypal and delusional tendency in the hallucinating subjects." The absence of clinically defined delusions mentioned here does not necessarily exclude implicit delusional content of hallucinations, though (cf. Sect. 7.1).

Caseness is a concept suitable for dimensional classification to define the threshold level of psychopathology for a diagnostic entity to be present, introduced by, among others, Wing's research group (Wing et al. 1978). In defining cases by levels of PSE rating, they found concordance with global clinical judgment. There are three dimensions of caseness (Sartorius 2011): the cluster of symptoms of the disease, the experienced distress, and the disability (impairment of functioning), which may vary independently of each other. What is defined as a case may depend on the contextual circumstances (clinical use, epidemiological surveys, etc.). In the DSM-IV, caseness implies symptoms causing "clinically significant distress or impairment in social, occupational, or other important areas of functioning." This has brought about discussions whether threshold cases having severe psychopathology (e.g., hallucinations or first-rank symptoms) with a high level of functioning should be diagnosed. Cases below threshold point are termed subthreshold or subclinical cases. These are generally understood as cases below the threshold of a clinical disorder, but there is another threshold defined by the WHO criteria of health, well-being. Subclinical cases above this threshold have been designated "between thresholds" cases (Helmchen and Linden 2000).

> Simon, a 40-year-old lawyer, being himself threatened by legal action, receives while praying a direct communication from God: candle wax left a "seal". This would be categorized as a delusional perception, and because of this and subsequent similar events he would qualify for an ICD-10 schizophrenia diagnosis. But as he was empowered by his experience and won his court case, he failed to meet the deterioration criterion of DSM-IV. (Fulford 2011)

This case, Fulford points out, illustrates the value-laden nature of psychiatric diagnostic concepts. The motivation for having this clinical significance clause, and the GAF scale, is to delimit the effect of not having hierarchal rules on the high rates of multiple diagnoses in the DSM (Regier 2012). The criterion is modified in DSM-5 that just notes that a mental disorder as "*usually* associated with significant distress or disability in social, occupational, or other important activities" (p. 20, our italics).

ICD-10 has no general requirements of functioning, but defines the threshold of personality disorder like this: "There is evidence that the individual's characteristic and enduring patterns of inner experience and behaviour deviate markedly as a whole from the culturally expected and accepted range (or 'norm')" (ICD-10, Green Book: Diagnostic criteria for research, p. 123).

6.7 Diagnostic Slippage and Neglect

In the course of time, a drift or slippage of the prototypes has been observed (cf. Parnas 2012). All suffering or agony is (monothetically) transformed to "depression" almost like a "knee-jerk" diagnosis, agitation or grandiosity is "mania," and restlessness and loss of concentration are synonymous with ADHD. "Schizophrenia" is limited to Schneiderian paranoid schizophrenia with negative symptoms and poor rapport, and "borderline personality disorder" is widened to encompass any mental state characterized by impulsivity and self-destructive behavior (even in the presence of psychotic symptoms, which are then deemed "simulation" or "dissociation"). Here is an glaring example:

> A 27-year-old woman is admitted in a "regressive" state, dependently clinging to her husband. She is found "projecting" and "manipulating". She is diagnosed with a personality disorder and offered referral to a group therapy unit, but as she cannot decide, she is discharged. Later the same day she is readmitted, this time disclosing ideas of being watched and persecuted. She is in a state of perplexity and ambivalence explaining her indecision.

Mental states accompanied by any kind of splitting are regarded as "dissociative," and thus various psychopathological manifestations in schizophrenia have been so labeled (Schäfer et al. 2008), including passivity phenomena and hallucinations. One popular instrument of assessing dissociative phenomena, the Dissociative Experience Scale (DES, Bernstein and Putnam 1986) covers items like:

> Item 27: Some people sometimes find that they hear voices inside their head that tell them to do things or comment on things that they are doing,

which are in fact commenting voices, a Schneiderian first-rank symptom of schizophrenia.

The DES describes several well-known subjective disorders of self-awareness, such as derealization, depersonalization, mirror-related phenomena, and inability to discriminate between modalities of intentionality, all covered by the Examination of Anomalous Self-Experiences (EASE) instrument of self-disorders in the schizophrenia spectrum (Parnas et al. 2005b). By expanding the concept of dissociation to include such phenomena, it can, not surprisingly, be found in scales reflecting schizotypal features (Giesbracht and Merckelbach 2008).

The principle of charity refers to the attribution of rational intentions to another person. By way of this principle, psychopathology may be played down, psychologized, explained away, and thus, normalized. There is also a tendency among some clinicians to screen out psychopathology that might be reactions to external stress factors, e.g., mobbing, disregarding the fact that not everybody reacts pathologically under such circumstances.

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Considering Organic Pathology

7

Abstract

In this chapter, we examine the interface between organic mental disorders and psychiatric disorders having resemblance with organic states. Organic brain disease can mimic any spectrum of mental disorders. But the course of illness, the often later age of onset, the relation to a known brain affection, and qualitative differences in psychopathology are helpful for making the differential diagnosis. Organic psychoses are divided into acute delirious psychosis and (chronic) non-delirious psychosis often accompanied by focal neurological signs or cognitive impairment. Organic psychosis, as opposed to schizophrenia, is indicated by the predominance nonauditory hallucinations and delusions without self-reference or systematization. Functional mental illness may also mimic organic diseases (dementia and neurological disease), and the diagnosis is supported by the changing and inconsistent clinical findings and the absence of convincing neurological signs and of abnormal paraclinical results.

This chapter deals with a borderland made up by *organic mental disorders* in the broad sense: mental disorders caused by brain injury and degeneration, cardiopulmonary diseases affecting the brain, neuroinfection, metabolic brain diseases, toxic and drug-related states, etc., and *psychiatric disorders* giving the impression of organic disorders.

Organic disorders are traditionally contrasted to functional mental disorders without coarse brain affection. Neuropsychiatry often makes a great play with defining severe mental disorders like bipolar disorder and schizophrenia as "brain diseases." The sense of this contention is, however, rather obscure. On the one hand, it is a trivial ascertainment that the brain is somehow involved in these conditions; on the other hand, it would be pointless to claim that the pathological process in these cases is restricted to the brain. In fact, multiple interactive psychological and

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environmental factors are definitely at work (cf. the so-called biopsychosocial model). Neurobiological findings in posttraumatic stress disorders, usually associated with sociopsychological factors, pose questions as to which are the preexisting vulnerability factors and which are consequences of the trauma (Heim and Nemeroff 2009). Neurological soft signs, i.e., minor neurological abnormalities including motor, sensory, and inhibitory dysfunction (e.g., dysdiadochokinesia, stereognosis, and primitive reflexes), are observed in major mental disorders such as schizophrenia (Chan et al. 2010; Bombin et al. 2005), bipolar disorder (Zhao et al. 2013), and OCD (Hollander et al. 1990), but not in major depression. The significance of these findings is not clear either.

As organic disorders may mimic practically any spectrum of mental illness, it is decisive for the differential diagnosis to include a medical history, physical examination, and paraclinical tests. In case of a concrete suspicion of an organic disorder, the prescription of neuropsychological assessment, electroencephalography, imaging techniques, etc., should be considered. In the following, we will take a closer view of the psychiatric presentation of some of the states causing special difficulties for the *clinical* differential diagnosis. In this context, the particulars of genetics, neural correlates, etc., are of secondary importance.

7.1 General Aspects of Organic Psychopathology

Metabolic and drug-released conditions result in relatively uniform mental disorders, as distinct from much more complex mental and neurological states resulting from brain injury.

Having studied the mental effect of injury of frontal cortex in World War II soldiers, Goldstein (2012) suggests that what is lost is the abstract or symbolic attitude (in favor of the concrete attitude). Schizophrenic psychosis will usually have a self-referent character, or at least the psychotic content will be experienced as having strong implications for the patient. In organic psychosis, the psychotic theme may appear unimportant or irrelevant for the patient, e.g., watching insects or blood coming out of the faucet.

Acute organic hallucinations arise "synchronically" from the mental state caused by the acute organic brain disease as opposed to, e.g., hallucinations in schizophrenia evolving gradually ("diachronically") from the changed structure of experience (Ey 2012). These two categories of hallucinations are considered psychotic because of their built-in delusional content, the patient's indispensable conviction. Complex visual hallucinations with clear images beyond the patient's control but *without* delusional content (called *eidolia* by Ey, ibid.) commonly occur in old people with visual impairment, known under the name, Charles Bonnet syndrome (O'Farrell et al. 2010). Similarly, musical hallucinations are described by some deaf people (Berrios 1990).

Organic psychoses are characterized by hallucinations beyond the auditory modality. In schizophrenia and severe depression, hallucinations occur in all perceptual modalities, but the predominance of visual, olfactory (phantosmia),

gustatory, and tactile (or haptic) hallucinations should always rouse the suspicion of an organic state. Stereotyped visual hallucinations involving well-known faces and figures in bright colors are observed in various organic and drug-induced states (Manford and Andermann 1998). In organic psychosis, there is no double orientation toward the psychotic experiences, as in schizophrenia (see Sect. 8.1), and delirious patients act on their hallucinations as the only existing reality.

Cognitive dysfunction, in the broad sense of the term, is generally taken as a prominent mark of organic brain disease. However, acute phases (and even the premorbid, inter-episodic, and residual phases) of functional psychosis are frequently attended with difficulty concentrating and other cognitive failure, complicating the differential diagnosis. Thus, cognitive dysfunction does not preclude functional psychosis. On the other hand, the presence of cognitive dysfunction in functional psychoses has been adduced as a proof of a "neurodysfunction" underlying these "neuropsychiatric" disorders, in spite of the fact that many classic cases of these disorders are free from cognitive dysfunction (see also "Pseudodementia").

7.2 The Psychiatric Expressivity of Organic Brain Disease

We will here examine primarily the behavioral aspects of organic delirium and dementia.

The delirium has an acute onset and a fluctuating course—worse at night with disrupted sleep-wake cycle, and it is characterized by disorientation, distractibility, impaired attention, loss of short-term memory, fragmentary and disorganized thinking, hallucinatory behavior (e.g., picking, pulling strings), hyper- (or hypo-)activity, and, mostly in delirium tremens, suggestibility (e.g., "reading" a blank page).

The chronic organic reaction, dementia, subsumed under *major neurocognitive disorders* in DSM-5, is distinguished by stability, clear consciousness, preserved sleep-wake cycle, and usually no hallucinatory behavior. An exception from this generalization is Lewy body dementia rather characterized by fluctuating attention and alertness and visual hallucinations (Cooper and Greene 2005).

In dementia, thinking is rigid and perseverating. The term, perseveration, seems to cover three different clinical types: compulsive repetition, impairment of switching, and ideational perseveration. Compulsive repetition is more frequent in the schizophrenic patients and extensive impairment of switching more frequent in the demented (Freeman and Gathercole 1966; see also Sect. 5.8). In frontotemporal dementia, the patient may present fluent dysphasia with empty, circumlocutory speech, anomia, and reduced vocabulary and word comprehension (Cooper and Greene 2005). Frontotemporal dementia is also distinguished by personality change (see Sect. 7.4.6) and behavioral abnormalities, such as disinhibition, personal neglect, gluttony and sweet food preference, wandering, and motor and verbal stereotypies (Bathgate et al. 2001).

Cooper and Greene (2005) argue that certain abnormal neurological signs may be of significance in differentiating between organic causes of dementia. They

mention, e.g., extrapyramidal signs in Lewy body dementia and pupillary abnormalities in neurosyphilis.

Neuropsychological testing is beyond the scope of this book.

7.3 Organic States Hard to Recognize

The early, insidious stages of non-acute organic states are hard to diagnose and are often misdiagnosed as, e.g., depression or neurasthenic reactions.

Cognitive decline can be demonstrated years before dementia in Alzheimer's disease (Almieva et al. 2008). During this "prodromal" phase, there is successive emergence of depressive symptoms and functional impairment as well as cognitive deficits. Depression has been said to be predictive of dementia but may as well be interpreted as nonspecific affective and behavioral aspects of dementia itself.

The diagnosis, mild cognitive impairment, has been introduced as a transitional state between the cognitive changes of normal ageing and Alzheimer's disease (Petersen 2004). This diagnosis is, however, regarded as rather heterogeneous by some researchers, e.g., Dubois (2000) who enumerates several alternatives to early Alzheimer's disease such as physiological changes of ageing, functional disturbances of depression, and drug-induced states.

Organic psychosis can present itself as any functional psychosis. Paraneoplastic states can, for instance, manifest themselves as confusion, agitation, depression, and productive psychosis before the onset of focal symptoms (Kayser et al. 2010). In organic psychosis, the demonstration of an organic cause, a later age of onset, the specific course of illness, and the presence of cognitive disorder and neurological signs determine the right diagnosis. Weitbrecht provides the following example:

> A 59-year-old housemaid complained that she no longer felt equal to her duties, aired thoughts about not wanting to live anymore, and made an attempt at drowning herself. She was diagnosed with depression. Behind the depressive presentation, she appeared to harbor extensive sexual delusions concerning the son of the family, suggesting a paranoid psychosis or even late schizophrenia. The physical examination revealed hydrocephalus and cortical atrophy, and the final psychiatric diagnosis was organic dementia. (Weitbrecht 1966, p. 23ff)

The *personality change* in early stages of dementia before the development of major cognitive impairment may be difficult to recognize (see Sect. 7.4.6).

Delirium is a frequent condition among elderly somatic inpatients. The hyperactive subtype attracts immediate attention, while the hypoactive subtype, prevalent among older patients, is largely overlooked or misdiagnosed as depression or dementia (Peterson et al. 2006; Fong et al. 2009).

In the following, we will first (Sect. 7.4) inquire into organic states mimicking or resulting in mental illness and then turn to mental illness mimicking organic brain disease (Sect. 7.5).

7.4 Organic States Mimicking Functional Mental Illness

Organic brain disease can result in psychopathology similar to practically any variety of mental illness. Closer inspection often reveals subtle differences of importance for the differential diagnosis. The relation between brain disease and mental illness is often complicated. The organic process may result in superficial mimicry, or it may be involved in the pathogenesis of a genuine mental illness, thus serving as a contributory predisposing or provoking cause (cf. Birnbaum 1974).

7.4.1 Organic (Secondary) Psychosis

Organic states can assume the form of acute delirious psychosis or as non-delirious affective, paranoid, or disorganized psychosis. This section will center on the latter group. The organic nature of a psychosis is betrayed by atypical presentation, temporal relation to a medical cause, direct physiological causal relationship to the etiological agent, and the absence of evidence of a primary psychotic illness that may better explain the presentation (Keshavan and Kaneko 2013). A late onset can also be suggestive of organicity. Virtually any substance, prescribed drug, or medical condition affecting nervous system function can present with psychiatric symptoms (ibid., Table 1, p. 5; Stephane et al. 2015).

The clinical unraveling of the causal factors may be difficult. One reason could be the covering up of substance abuse:

> A woman in her mid-twenties is admitted with a productive psychosis. She is a trained mechanic, working in a garage at the time of admission. She has never before had mental difficulties, has always been quite extroverted, sporting, and adventurous. In a matter of weeks she has changed for no obvious reason, has isolated herself and started having visual hallucination: watching a man walking around in her apartment. A CT scan of her brain and blood tests are all normal. Eventually, it turns out that she has been taking multiple psychoactive drugs in the period up to the onset of the psychosis. The diagnosis is a drug-released psychosis.

7.4.2 Organic Paranoid and Schizophrenia-Like Psychosis

Organic schizophrenia-like psychosis is defined as a psychosis caused by known organic brain disease, displaying features similar to genuine schizophrenia. It seems to constitute a very broad group of psychoses with productive symptoms (hallucinations, delusions, etc.), and "schizophrenia-like" invites to an even broader definition. A number of organic states seem to have the potential for causing such broadly defined psychoses (Keshavan and Jindal 2010, p. 10). One line of research distinguishes between "primary" (idiopathic or "functional") and "secondary" (symptomatic or organic) schizophrenia, but it is claimed that the border between them is arbitrary. Judged by the presence of productive symptoms, it is difficult to tell

primary and secondary schizophrenia apart. However, as we will see in Chap. 8, *what is essential to the diagnosis* of (primary) schizophrenia is not the presence of productive psychosis but the detection of the fundamental processes of the disease (see Sects. 8.2 and 8.3), i.e., the presence of disordered self-awareness. The thematic contents of the *organic paranoid psychosis* are simple and centered on the immediate environment (family, neighbors) deliberately neglecting, spying on, belittling, or even poisoning the patient; systematized persecutory delusions like those seen in schizophrenia are rare (Weitbrecht 1966, p. 78). Negative symptoms, usually associated with schizophrenia, may also be found in organic states (secondary negative symptoms, Peralta et al. 2000), possibly expressive of organic, cognitive dysfunction, and of extrapyramidal side effects to antipsychotics.

Keshavan and Jindal refer to early studies suggesting certain psychopathological features to be more frequent in secondary (organic) than in primary (true) schizophrenia: catatonic symptoms, altered states of consciousness (i.e., confusional or "dreamlike" states), visual hallucinations, misidentification syndromes (e.g., Capgras syndrome), and later age of onset. None of these are pathognomonic for secondary schizophrenia. In an empirical study, Cutting (1987) finds two characteristic delusional themes in organic psychosis as compared to acute schizophrenia: a belief in imminent misadventure to others and a belief in bizarre happenings in the immediate vicinity. Furthermore, the most significant discriminator between organic and schizophrenic delusional themes appears to be whether *others* are the victims or principal characters in an unfolding drama (organic psychosis) as opposed to agents perpetrating some action against *the self* (schizophrenia). This is in accordance with the autistic-solipsistic structure of schizophrenic experiencing (see Chap. 8). Here are a couple of Cutting's examples:

> Doctor on the ward is going to marry a beautiful person. (Organic delusion)
>
> Brain rotating. Other people wearing her clothes. (Schizophrenic delusions)

The list of infectious agents reported to sporadically cause psychotic symptoms is long: *Treponema pallidum*, *Borrelia burgdorferi*, and numerous viruses (Yolken and Torrey 2008). A special interest has centered on autoimmune encephalitis. Patients with anti–N-methyl-D-aspartate receptor (NMDAR) encephalitis often develop isolated psychiatric episodes at disease onset or more often at relapse with prominent psychiatric manifestations, such as delusional and affective disorders (Kayser et al. 2013).

Voices are commonly found in *temporal lobe seizures* and in the period immediately surrounding generalized seizures (McCarthy-Jones 2012, p. 122), but epileptic psychoses of greatest importance for the differential diagnosis are the *postictal and interictal psychoses*. Schizophreniform or paranoid psychosis is found predominantly in temporal lobe epilepsy. There is a free interval after the seizure before the onset of psychosis which may last several weeks. Recurring postictal episodes may develop into interictal "schizophrenia-like psychosis of the epilepsy" (or SLPE). The so-called Slater psychosis was originally described as a chronic organic schizophrenia-like psychosis in epileptics. These patients may display all kinds of

schizophrenic symptoms, but catatonic phenomena are unusual, and loss of affective response does not occur as early or become as marked as in schizophrenia. They are friendlier, more cooperative, and less suspicious (Beard and Slater 1962; Slater et al. 1963; David et al. [Lishman] 2009, p. 344). There is some empirical evidence of increased risk of such psychoses in patients with temporal lobe seizures (Cascella et al. 2009), and people with a history of epilepsy of any type have 2.5–3 times the risk of developing schizophrenia or schizophrenia-like psychosis compared with the general population (Qin et al. 2005). Alternative psychosis and forced normalization are terms used for the paradoxical relationship between seizure and EEG abnormality on one hand and psychosis on the other, i.e., psychosis at the time of normalization of the EEG (Wolf and Trimble 1985), a fact of theoretical interest as to the nature of epileptic psychoses.

Psychotic phenomena during the aural and ictal phases are usually of very short duration and may, therefore, be confused with micropsychotic episodes as seen, e.g., in schizotypy. Ictal psychotic symptoms, mainly associated with partial seizures, can manifest as visual, gustatory, olfactory, or auditory hallucinations (Weisholtz and Dworetzky 2014). Seizures in the occipital lobe may give rise to unformed visual hallucinations (colors and lights—photopsia), in the occipitotemporal region to autoscopy, in the limbic structures to olfactory and gustatory hallucinations, etc.

Hallucinations are frequently reported in Parkinson's disease (Stephane et al. 2015), the frequency being dependent of the study design. Hallucinations with retained insight are most frequent in the earlier stages (some patients even experiencing them as pleasant) and more severe hallucinations in later stages.

Catatonia is a syndrome of motor abnormalities, first of all hypertonia and excitement (see Sect. 5.3.1). Since Kraepelin, this syndrome has been tightly associated with schizophrenia, but it has also been demonstrated in affective illness and in drug-related and organic states (Taylor and Fink 2003) and especially in brain injury and neuroinfection. Malignant catatonia (lethal or fatal catatonia) is "an acute onset fulminating psychotic and delirious illness, often with hyperthermia that results in death in about half the patients" (ibid. p. 39). A relation between malignant catatonia and neuroleptic malignant syndrome has been suggested, but in spite of similarities in motor symptoms, the course of the two conditions differs: lethal catatonia often begins with extreme psychotic excitement, whereas the neuroleptic malignant syndrome begins with severe extrapyramidally induced muscle rigidity (Castillo et al. 1989).

Pfropfschizophrenie (or "grafted" schizophrenia) was a term introduced by Kraepelin for schizophrenia (grafted) in mental retardation.

Psychoactive substances can induce acute toxic psychoses as well as chronic paranoid or schizophrenia-like psychoses. The chronic psychosis induced by amphetamine abuse may be very similar to paranoid schizophrenia, and in many cases, it must be interpreted as schizophrenia precipitated by the drug in vulnerable individuals. However, there are some clinical differences: the prominence of visual hallucinations in some cases of amphetamine psychosis and the absence of schizophrenic thought disorder in all cases (Bell 1965). Cannabis, too, is known to increase

the risk of psychotic outcome, including schizophrenia (Moore et al. 2007), even when the "reverse causation," using cannabis to alleviate symptoms,[1] is ruled out. Drug induced psychosis is more likely to recover within weeks or a few months depending on the specific drug (cf. Rounsaville 2007), and ICD-10 limits the duration to a maximum of 6 months. That means that the ICD-10 diagnosis of schizophrenia cannot be made until 6 months after the discontinuation of the drug. DSM-5 states that it is likely to disappear within 1 month or so of cessation of the drug (p. 489). To establish the schizophrenia diagnosis in patients with severe addiction to drugs known to induce psychosis, it is helpful to demonstrate the presence of fundamental symptoms and self-disorders in the premorbid phase, before the onset of abuse and psychosis.

Substance-induced psychosis may be accompanied by characteristic qualities of psychopathology, such as haptic (tactile) hallucinations (or formication, the feeling of bugs crawling under the skin) and lilliputian hallucinations (of objects of reduced size) reported in cocaine and amphetamine addiction. Haptic hallucinations may be confused with sensations caused by skin diseases or neuropathy.

Alcoholic hallucinosis is sometimes used in a broad sense for auditory or visual hallucinations in alcoholics occurring in clear consciousness, as opposed to delirium tremens (David et al. [Lishman] 2009, p. 693–4). It is also used in a more narrow sense for an often chronic psychosis in heavy drinkers characterized by auditory hallucinations and clear consciousness. Historically, there have been different schools: one, stressing some impairment of consciousness, regarding it as related to delirium, and another as related to schizophrenia, stressing the chronic course and the clear consciousness (Glass 1989). The auditory hallucinations may take the shape of unformed hallucinations or as usually threatening and reproaching voices spoken to the patient. Major formal thought disorder is absent. *Delusional jealousy* has been associated with alcoholism (alcohol paranoia; Michael et al. 1995). Its nosological status is unclear.

The withdrawal of certain substances (especially alcohol and benzodiazepines) may cause delirious psychoses (the alcohol withdrawal psychosis is called delirium tremens). Delirium tremens may often have a paranoid onset like the 32-year-old man walking alone into the emergency department in an anxious state complaining that the police were out to get him. He was first diagnosed with paranoid psychosis until the right etiology was established (case 2, Fauman and Fauman 1977).

7.4.3 Organic Mood Disorders

Depression, in the broad sense of the term, is widespread in medical illness (Rodin and Voshart 1986). In assessing depression in the presence of severe medical illness, it is necessary to distinguish between the psychological reaction to having the illness (demotivation), the confusion with vegetative symptoms of the illness itself (fatigue, weight loss, etc.), a depressive-like state directly biologically

[1] Cannabis is reported by many psychotic patients to act as a sedative (Schofield et al. 2006).

released by the illness itself (organic pseudo-depression), and the triggering of, e.g., a bipolar depression by changes in the living conditions (depression proper); see also the subdivision of depressions in Chap. 9. By way of example, depression in HIV infection may be either the direct cognitive effect of the infection, a psychological reaction to the infection, or even a side effect of the medication.

The organic causes of depression are manifold: neuroinfection, brain traumas, postictal states, endocrinological illness, etc. For example, depression is very frequently reported in Parkinson's disease (Aarsland et al. 1999). Depression may be triggered by drugs, such as long-term steroid treatment, propranolol, and statins. Psychopharmacological agents, too, may cause depression, e.g., antipsychotics and even antidepressants (as suggested by Fava 1994).

Organic *maniform psychoses* (secondary mania) constitute a group of psychoses characterized by exaltation and motor excitement, but not necessarily by manic mood in the strict sense of the word (Sect. 11.1.1). Late-onset mania, i.e., above age 50, appears to have an organic basis in the majority of cases (Sami et al. 2015). Organic delirium often shows as a maniform picture but with signs of disorientation, misidentification, and anxiety. In neurosyphilis there is grandiosity like in severe mania, but the ideas are presented in a monotonous, uninventive way (listing astronomical figures), and there are clear signs of dementia (Weitbrecht 1966). Sass (2001, quoting Minkowski) states that grandiosity in neurosyphilis involves a wild dysregulation of thinking, whereas grandiosity in mania stems from a playful flight of ideas.

The onset of symptoms in bipolar disorder is around age 20, and a much later onset indicates an organic cause. Hypergraphia is a compulsion to write, encountered in mania and hypomania, as well as in schizophrenia, but also in temporal lobe epilepsy (Waxman and Geschwind 1975). Frontal lobe syndromes (see above) may also have a superficial resemblance with hypomania. Short-term corticosteroid therapy may give rise to euphoria and hypomania and long-term therapy to depression (Warrington and Bostwick 2006). Drug abuse may imitate or worsen bipolar disorder.

7.4.4 Organic Anxiety and Obsessive-Compulsive Phenomena

Anxiety accompanies many organic states. Certain anxiety states seem related to specific physical conditions. For example, intense and unprovoked anxiety may be part of temporal lobe auras (David et al. [Lishman] 2009, p. 320); panic disorder appears to be related to thyroid disease (Stein 1986) and joint hypermobility syndrome (Bulbena et al. 1993), and many other physical conditions may mimic panic disorder: cardiovascular, respiratory, endocrine, and neurological diseases (e.g., partial epilepsy (Thompson et al. 2000), and drug intoxication and withdrawal (Zal 1990, p. 83–84).

Obsessive-compulsive-like phenomena (OC) in the broad sense of the term are widespread in organic diseases of various origin, brain tumors, brain trauma, encephalitis, infection, metabolic disorders, etc. (George et al. 1992). Nonorganic

OC are dealt with in Sect. 10.4. In a comparison of a small group of organic OCD patients (DSM-IIIR) with nonorganic cases, Yaryura-Tobias et al. (2000) point out the following characteristics of the organic group: they are indifferent to their illness, lack motivation, are non-anxious even during exposure exercises, have rigid and concrete thinking, and are treatment refractory. The nature of the OC is not specified, though. Their only case history shows pseudo-obsession and magical rituals rather than genuine obsessions and compulsions (Sect. 10.4): a 67-year-old man with multiple infarcts and cerebral atrophy, for 1 year harboring obsessions revolving "around a fear of a disastrous consequence occurring to loved ones and around sexual matters." His anxiety caused by these thoughts was alleviated through the compulsion to touch, scratch, or pick at his teeth.

OC phenomena have been related to a number of specific organic conditions. The problem with the empirical data is the vague definition of OC and the casuistic nature of the research reports. For example, in AIDS repeated bodily scrutiny for evidence of progression of the disease, obsessive ruminations on death, and endeavors to recollect sexual partners are mentioned as examples of OCD (David et al. [Lishman] 2009, p. 416), but these are not examples of true OCD as the phenomena seem like egosyntonic, psychological consequences of the severe illness. OC following brain injury is relatively rare (ibid. p. 221–222). The reports from cases of encephalitis lethargica (ibid p. 446) are not quite convincing either: ruminations, tic-like phenomena, and bizarre acts, e.g., indecency, "compulsions to tear their clothes, pull out teeth, tie themselves with bonds, and to strangle cats," which have nothing to do with OCD.

Patients with Tourette's syndrome, a movement disorder, are said to have OC behaviors in the vast majority of the cases (David et al. [Lishman] 2009, p. 789). It is a whole range of compulsive-like phenomena divided into various subgroups according to the behavioral pattern and way of emergence: complex motor tics (involuntary movements, e.g., skipping), compulsive tics (repetitive movements to reduce tension, e.g., touching), impulsive tics (repetitive movements without forethought), impulsive-compulsive tics, and (psychotic-like) "schizo-obsessive" symptoms (Palumbo and Kurlan 2007). Neither of these is related to genuine obsessions like those in OCD, only a "premonitory sensation" of having to do the acts, because it "feels just right," and therefore, they are not compulsions in the proper sense of the word. For the definition of tics, see also Sect. 5.2.

PANDAS (Pediatric Autoimmune Neuropsychiatric Disorders Associated with Streptococcal Infections) are a syndrome observed in children following beta-hemolytic streptococcal infection. The central psychopathology is abruptly arising obsessive-compulsive phenomena (e.g., repetitive handwashing) lasting for weeks and disappearing just as abruptly (Snider and Swedo 2004; Williams et al. 2008). Compared with childhood OCD, the onset is earlier, and the patients are predominantly boys.

Punding is a stereotyped behavior originally described in chronic amphetamine users but also seen in cocaine users and in Parkinson patients treated with high-dosage dopamine (Evans et al. 2004). In punding there is a repetitive examination of objects, picking them up, arranging them, and taking them apart. This

behavior is purposeless and not related to an obsession, and therefore, it is not a compulsion.

Organic hoarding is hoarding in individuals with documented neuropathology. The patients are more likely to live in trash, their hoarding is less goal directed, and they are often more capable of discarding things (Slyne and Tolin 2014, p. 179). See also Sects. 5.1 and 10.4.

7.4.5 Organic Personality Change

A personality is, by definition, an enduring pattern of personality traits since adolescence or early adulthood (DSM-5). Personality change refers to a later change from the premorbid personality. To speak of a personality change, we must know the premorbid personality, traceable throughout the patient's life history and usually be communicated by relatives. Organic personality change is mostly related to affection of the frontal lobes. Most well-known is the injury to the *orbitofrontal or ventromedial prefrontal cortex*, often used synonymously, associated with psychopathology leading to major interpersonal, occupational, and legal problems (Zald and Andreotti 2010). The syndrome consists in antisocial behaviors such as disinhibition, emotional lability, and impulsivity (Chow 2000), lack of initiative and spontaneity, a lack of normal tact and restraints in interpersonal relationships, impaired judgment, little concern about the future, sexual inhibition, etc. (David et al. [Lishman] 2009, p. 58):

> A famous case reported by Damasio (1994, p. 4–51) is Phineas Gage living in mid-nineteenth century. A 25-year-old railroad construction foreman at that time, Gage met with a detonation accident sending an iron rod through his brain. He survived without course neurological injury but his personality was completely transformed. From having "temporate habits" he was now capricious, vulgar etc. A later reconstruction from his skull suggests a ventromedial damage.

Personality change often sets in *before the onset of dementia*. Usually, the personality becomes more accentuated, "primitivized," or "caricatured." A longitudinal study Balsis et al. (2005) found changes in half of patients who later converted into dementia, the most common being increased rigidity, growing apathy, increased egocentricity, and impaired emotional control. In some instances, the earliest signs of change are psychiatric symptoms such as withdrawal, suspiciousness, anxiety, and irritability (Oppenheim 1994). The dissolution of the personality continues with progressing dementia. The most pronounced personality change and behavioral disturbances with poor insight are found in frontal dementia. Personality change *after stroke* is reported as reduced patience and increased frustration, reduced confidence, more dissatisfaction, and a less easy going nature (Stone et al. 2005). Similar changes *after encephalitis* have been described ever since the encephalitis lethargica epidemic of the early twentieth century: overactivity and impulsive, antisocial behavior (David et al. [Lishman] 2009, p. 445). In *Parkinson's disease* egocentricity, querulousness, and an exacting attitude toward people around the patient and

even paranoid traits are observed, but probably mostly as a reaction to the disability (ibid., p. 767).

A reversible personality change, along with various affective changes, may be observed in the post-concussion syndrome (Rathbone et al. 2015). A special interictal personality change in *temporal lobe epilepsy* (coined the Geschwind syndrome) has been described, comprising alterations in sexual behavior (usually hyposexuality), religiosity, and a tendency toward extensive and compulsive writing and drawing (Waxman and Geschwind 1975; Benson 1991), but its existence is somewhat controversial. Personality change is also a common attendant phenomenon of metabolic disorders like liver failure (Blei and Córdoba 2001). For nonorganic causes of personality change, like posttraumatic states (torture, war, etc., hence traumatic personality change), see Sect. 12.1.

7.5 Mental Illness Mimicking Organic States

7.5.1 Pseudodementia

Pseudodementia as a clinical term is probably obsolete and at least ambiguous. Originally introduced by Wernicke for "hysterical states mimicking mental weakness" (Bulbena and Berrios 1986), it now seems to cover at least three different conditions: an impairment in memory, learning, and related cognitive functions caused by a psychiatric illness, an impairment likely to be nonprogressive and potentially reversible, and an impairment in which no or only a minor neuropathological process can be identified (Sachdev et al. 1990).

Cognitive dysfunction accompanies a number of psychiatric states, such as affective disorders and psychoses, and some trait-like conditions such as ADHD and schizotypy. Drugs (e.g., benzodiazepines) and alcohol abuse cause cognitive impairment. The question of dementia in alcoholics can only be settled after some months of abstinence on the grounds of the reversible cognitive impairment.

Depression is probably the most important cause of pseudodementia (its counterpart pseudo-depression, organic illness mimicking depression: see Sect. 7.4.3). The *depressive pseudodementia*, as opposed to true dementia, is characterized by, e.g., a more sudden onset, no decline in abilities or memory prior to the episode, retained affectivity, no tendency to confabulation, inconsistent performance on cognitive tests, and no dysphasia or dyspraxia (cf. Lishman 1987, p. 411). There will often be a history of previous affective episodes, too. Cognitive deficits are also present in patients with unipolar disorder even in the remitted state (Hasselbalch et al. 2012), and subtle impairments of attention and memory can be demonstrated in euthymic patients with bipolar disorder, too (Mahli et al. 2007).

Dementia praecox (precocious dementia) was Kraepelin's term for later schizophrenia, and, as the name implies, it often involves a certain form of dementia-like features. In 19th century German psychiatry hebephrenic patients are described with words like *albern* and *läppisch*, both meaning silly, and the schizophrenic process is called *Verblödung* meaning mental enfeeblement. In neuropsychiatry,

schizophrenia, like all psychoses, is considered a brain disease (e.g., van Haren et al. 2008) and neurocognitive impairment a core feature of the disease (e.g., Green and Neuchterlein 1999). E.g., the presence of neurological soft signs is taken as a marker of the underlying neurodysfunction (Tosato and Dazzan 2005). However, cognitive disorder is not universally present in schizophrenia, low IQ is found only in subgroups of the disease (Urfer-Parnas 2009; Urfer-Parnas et al. 2007; Urfer-Parnas et al. 2010). Longitudinal studies show that in patients who do show signs of cognitive impairment, the cognitive functioning does not appear to deteriorate over time, and the majority of patients have the potential to achieve long-term remission and functional recovery (Zipursky et al. 2013). The role of intelligence in schizophrenia is a complicated matter. Viewed as the mental capacity of adapting to the world it may both influence and be influenced during the neuro-developmental trajectories. Similar IQ deficits reflect differential functional patterns and temporal vicissitudes of the processes operative in the mental disorder. There is no robustly prevalent deficit specific to schizophrenia or affective disorder (Urfer-Parnas 2009). Surprisingly, Owen et al. (2007) report that under conditions where common sense and logic conflict, people with schizophrenia reason more logically than healthy individuals, i.e. have *enhanced* theoretical rationality, a result contested by Revsbech (2014), unable to replicate it.

Certain clinical states of schizophrenia do have the appearance of dementia or mental retardation. One of them is *Benommenheit* (literally meaning something like *daze* or *clouding*), a symptom complex suggested by Bleuler (1950, p. 221–223), often, but not always, related to catatonic stupor. It is accompanied by apraxia (see also Sect. 5.2). As it is difficult to translate into English, the German name has been preserved in the English translation of Bleuler's book. It is characterized by a slowing down of all psychic processes, but in contradistinction to depressive inhibition, there is no depressive mood.

A mild clouding of consciousness, similar to Benommenheit, is a salient component of *acute or transient psychotic disorders* overlapping with certain cycloid psychoses (the so-called confusion syndromes, Sigmund and Mundt 1999) and the related oneiroid states (Mayer-Gross 1924), but is rare in schizophrenia. *Severe clouding of consciousness* with cognitive disturbances like disorientation, memory problems, and misidentification is seen in organic delirium. "Perplexity," often used in American psychiatry for clouding of consciousness (mentioned along with confusion), should not be mistaken for perplexity in the proper sense of the word, which refers to the experience of being unable to grasp the contextually relevant meaning, closely related to loss of common sense (Henriksen et al. 2010; see also Sect. 8.3), or to still another phenomenon related by schizophrenia patients, a subjective experience of diminished transparency of consciousness, a sense of not being fully alert, fully awake, and fully conscious (a self-experience, Sect. 8.3).

The Ganser syndrome is a type of *dissociative pseudodementia* consisting of approximate answers to simple questions (*vorbeigehen* or *vorbeireden*, talking past the point), clinical confusion, auditory and visual hallucinations, amnesia for recent events, sensory and motor conversion, and vacant or fixated gaze (Ganser 1974; Drob and Meehan 2000). The nosological status of this definition is obscure. In

DSM-5 the definition is reduced to "the giving of approximate and vague answers" (p. 292) and similarly so in DSM-IV. Thus defined, the syndrome is frequently found in patients with head injury (David et al. [Lishman] 2009, p. 221), and the definition does not exclude formal thought disorder either. ICD-10 holds that it is "usually accompanied by several other dissociative symptoms, often in circumstances that suggest a psychogenic etiology," thus reflecting the original definition. Ganser observed the syndrome in prisoners and the syndrome still has implications for forensic psychiatry as differential diagnosis of malingering.

7.5.2 Pseudodelirium

Pseudodelirium has been used to indicate functional conditions mimicking organic delirium (Lipowski 1983), e.g., mania, depression, and acute psychosis. The mild clouding of consciousness in acute psychosis may cause difficulties for the differential diagnosis of delirium (see above). In pseudodelirium there is no nocturnal worsening, psychotic symptoms bear the impress of a functional rather than organic psychosis, and EEG is normal; depression can mimic a hypoactive delirium (Simons 2001). However, severe psychomotor activity in mania and catatonic states may also lead to true delirium, *delirium acutum*, a life-threatening condition.

7.5.3 Functional Neurological Disorders

In the neurological examination, some inconsistency of findings is indicative of functional disorder (Stone et al. 2005), e.g., Hoover's sign revealing discrepancies of leg powers, "wrong way tongue deviation," etc. *La belle indifférence*, an apparent lack of concern about the nature or implications of symptoms or disability, is usually taken as synonymous with conversion disorder, but is more often expressive of an effort to appear cheerful in order to not be labeled as depressed or of a factitious disorder (ibid.).

Functional or dissociative seizures are usually called psychogenic non-epileptic seizures (PNES). The ultimate test is video-EEG recordings during seizure, but certain features more often present in dissociative than in epileptic seizures may be helpful for the differential diagnosis: gradual onset, fluctuating course, eyes closed, violent movements, side-to-side head movement, asynchronous clonic movements, pelvic thrusting, opisthotonus (*arc de cercle*), automatisms, weeping, and recall for period of unresponsiveness (David et al. [Lishman] 2009, Table 6.13, p. 359). The functional seizure does not follow the tonic-clonic phases (and may lack the reorientation phase), often takes a dramatic course, lasts longer than the epileptic, and is attended with normal pupil and Babinski responses, and the patient is accessible to influence (address) (Vitger 1980). Furthermore, the PNES often lack the stereotypic pattern characteristic of genuine epileptic seizures. An eyewitness description should always be sought and will often provide the most important clues to diagnosis (ibid.). PNES occur even in patients with genuine epilepsy, too, and their

seizures are similar to PNES in non-epileptic patients, as epileptic patients never observe their generalized seizures (and complex partial seizures). Furthermore, genuine epileptic seizures may mimic PNES, too, so to speak: seizures originating in the frontal lobes can appear bizarre and demonstrative, and seizures involving the cingulum may produce strong emotions and fear (Reuber and Elger 2003).

Paroxysmal depersonalization and derealization, sometimes giving the impression of psychomotor epilepsy, may form part of a symptom-poor schizophrenia variety, the endogenous juvenile-asthenic failure syndrome (Glatzel and Huber 1968; see Sect. 8.6).

Psychogenic *fugue* can be confused with postictal fugue. Fugue is a state of wandering followed by amnesia. Aicarda et al. (2008) point out these clinical indicators of psychogenic fugue: an identifiable emotional precipitant, socially appropriate wandering (without obvious confusion), and gradual recovery of orientation. Furthermore, the EEG will be normal.

The differential diagnosis between nonorganic catatonic states and organic states with increased rigidity may be very difficult. Acute catatonic phases with catalepsy and stupor, e.g., in schizophrenia, may give occasion for suspicion of malignant hyperthermia or neuroleptic malignant syndrome because of the general rigidity and also some elevation of creatine kinase in such catatonic states. But catatonia may also lead to a state related to these, malignant catatonia (see also Sect. 7.4.1).

7.5.4 Factitious Disorder and Malingering

Malingering refers to intentional and fraudulent production or the gross exaggeration of symptoms in order to obtain specific, tangible rewards, whereas factitious disorder refers to a more chronic condition with simulation or creation of somatic problems in the absence of clearly identifiable rewards (Overholser 1990). Factitious cases, which are regularly detected in somatic hospitals, can be divided among four subgroups: self-induced infections, simulated illnesses, chronic wounds, and surreptitious self-medication (Reich and Gottfried 1983). Like malingering, they may also enter the legal system for various reasons (Eisendraht and McNeil 2002).

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Indicators of Psychosis

8

Abstract

This chapter introduces the concept of psychosis, pivotal for psychopathology and nosology. Psychosis implies a loss of rationality, but the recognition of psychosis is not just a matter of identifying explicit, "psychotic" symptoms but requires a global appraisal of rationality. Even in the absence of circumscribed, productive symptoms of psychosis, certain clinical states are characterized by a loss of implicit rationality as seen in, e.g., disorganized (hebephrenic) schizophrenia. Most space in this chapter is devoted to schizophrenia, the quintessence of psychosis, and the schizophrenia spectrum, a broad range of clinical and subclinical states, many of which escape the diagnostic criteria. What distinguishes the schizophrenia spectrum disorders from nonschizophrenic disorders is its generative disorder, autism and disordered self-awareness, which contribute the specific, fundamental structure and coloring to all its psychopathological phenomena, e.g., the autistic-solipsistic quality of delusions. Transition sequences from nonpsychotic self-disorder to first-rank symptoms have been demonstrated. Failing to identify this fundamental structure, the clinician may be tempted to make diagnoses guided by single symptoms or characteristics (e.g., anxiety or personality disorder). Changing and multiple diagnoses should raise the suspicion of underlying schizophrenia spectrum. Acute, affective, and organic psychoses are treated elsewhere in this book.

The recognition of psychosis plays a pivotal part in diagnostics. The implications are manifold: psychosis determines the choice of treatment strategy, and it may necessitate coercion and measures of forensic psychiatry and incapacitation. Psychotic states are found in several diagnostic spectra: the schizophrenia spectrum, the subject of this chapter, the affective spectra (Chaps. 9 and 11), the nonschizophrenic, non-affective psychoses (chronic forms in Sect. 8.8, acute forms in 11.2

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and 11.3), and the organic and drug-related states (Sect. 7.4). In this chapter we will, as a starting point, summarize the notion of psychosis and then take a closer view on the schizophrenia spectrum and in particular its fundamental processes, illness trajectories, subclinical forms, and differential diagnosis.

8.1 Psychosis

The term, psychosis, has been lost in the recent versions of ICD and DSM and is only retained as an adjective to characterize certain clinical categories.[1] Productive psychoses are favored by the operational systems, hallucinations, and delusions abounding in the diagnostic algorithms. As a result, diagnoses like disorganized schizophrenia are disappearing and being replaced by, e.g., personality disorders, reflecting some of the behavioral aspects of the original diagnosis, such as impulsivity. But what precisely is psychosis? Psychosis is a failure of either the *implicit rationality* (sense of reality) as reflected in grossly maladapted behavior or of the *explicit*, "*theoretical*" *rationality* (reality judgment) revealing itself as delusions (Parnas 2015). We meet the former in, e.g., hebephrenic disorganization, and the latter in, e.g., the first-rank symptoms of paranoid schizophrenia.

The valid examination for psychosis implies a broader and more global approach than a mere registration of productive symptoms of psychosis (hallucinations, delusions, severe thought disorder, and severe catatonia). We hear of bizarre behavior indicating a severe loss of common sense (e.g., walking naked into the emergency room). The communication may be severely impaired due to incoherent or tangential speech. The patient recounts experiences, which are occupying him, frightening him, or leading him to apparently irrational acts. In a clinical setting, we observe that the patient is acting on abnormal experiences without inner resistance (egosyntonicity) or is frightened by them (just as happens with color inkblot cards in the Rorschach test as indication of impaired reality testing). Observations like these may be indicators of psychosis. As implicit rationality is related to the patient's lifeworld, it is essential to obtain a personal, coherent life history from the patient. So, psychosis is not just the presence of productive symptoms of psychosis but rather a psychopathological Gestalt, and clinical states like a severe major depressive or manic episode, even "without psychotic features" (DSM-5), severe dementia, and organic delirium are psychotic states, anyway. Psychoses cannot just be restricted to a list of diagnoses.

What matters the most for the differential diagnosis is not just the thematic contents of psychosis (e.g., persecution, reference, or grandiosity) but primarily the basic structure and specific quality of the phenomena. For example, delusions of reference have quite different qualities depending on their psychopathological context: in schizophrenia the ideas of reference will often have the "primary," athematic

[1] A list of diagnoses considered as psychotic has been added to the Danish translation of the ICD-10.

character of being in the center of everybody's attention, but in depression the reference will have an undercurrent of reproach or criticism.

The schizophrenic psychosis, emerging from the specific schizophrenic experiential framework informed by anomalous self-experiences, has a different quality, a fact which may give rise to diagnostic difficulty. The normal basic sense of reality (natural attitude) is weakened, and a pathological reality (solipsistic attitude) emerges. The coexistence of the two realities gives rise to the phenomenon called *double bookkeeping* or *double orientation* by Bleuler (1950, p. 378, 1934, p. 110–112) or double ontological orientation by Henriksen and Parnas (2014), the simultaneous living in two worlds, two different, incommensurable, and thus not conflicting realities. The patient may, e.g., believe to be God, but accepts to be admitted to a mental hospital or believe that the staff is poisoning her, but eats readily the food served by them. This phenomenon, widespread within the schizophrenia spectrum, can be recognized even in the prepsychotic phase. The fact that the psychotic symptoms emerge from intrinsic and habitual aspects of existence and living renders the transition into psychosis less conspicuous and explains the loss of insight in schizophrenia.

8.2 The Diagnostic Criteria of Schizophrenia

The core prototype of Dementia praecox or schizophrenia was formed at the turn of the century by, in the first place, Emil Kraepelin and Eugen Bleuler. In the course of the twentieth century, there has been a long series of attempts to further define and later "operationalize" the concept (Jansson and Parnas 2007). Diagnostic criteria have a strong influence on the frequency, severity, sex ratio, and prognosis of the diagnostic definition. The modern diagnoses of ICD-10 and DSM-5 outline a severe, productive psychosis, and so, milder and less productive cases, diagnosed with schizophrenia by broader systems, are thereby excluded. As an example, Bleuler's latent schizophrenia, a subtype of his broad definition (defined exclusively by the presence of fundamental symptoms), is now regarded as a separate illness (schizotypy). The choice of productive symptoms of ICD and DSM schizophrenia definitions was made for the sake of reliability. The Gestalt with its specific phenomena (disorders of self-awareness and autism) resisting operationalization was regarded as unreliable, and therefore omitted or transformed into behavioral signs (e.g., negative symptoms). Even the psychotic features have been simplified, taken out of their psychopathological context, and have lost some of their specificity. We are going to look into some of these.

DSM has been criticized for not offering a general account of what schizophrenia is (Maj 1998; Parnas 2011). DSM-5 only states that schizophrenia is "defined by abnormalities in one or more of the following five domains: delusions, hallucinations, disorganized thinking (speech), grossly disorganized or abnormal motor behavior (including catatonia), and negative symptoms" (p. 87). The diagnostic criteria consist of a set of symptomatological (sub)criteria, a chronological (duration) criterion, a functional criterion, and some exclusion criteria (critique of

Table 8.1 Comparison of the diagnostic algorithms of schizophrenia (simplified)

	DSM-5	ICD-10
Illness duration	6 months	1 month
Criteria algorithm	Two (or more) of the following, each present for a significant portion of time during a 1-month period (or less if successfully treated). At least one of these must be (1), (2), or (3)	Either at least one of the syndromes, symptoms, and signs listed below under (1) or at least two of the symptoms and signs listed under (2)
	1. Delusions	(1)
	2. Hallucinations	(a) Thought echo, insertion, withdrawal, or broadcasting
	3. Disorganized speech (e.g., frequent derailment or incoherence)	(b) Delusions of control, influence, or passivity; delusional perception
	4. Grossly disorganized or catatonic behavior	(c) Voices commenting on the patient's behavior or discussing him; voices coming from the body
	5. Negative symptoms (i.e., diminished emotional expression or avolition)	(d) Bizarre delusions
		(2)
		(e) Persistent hallucinations accompanied by delusions or overvalued ideas
		(f) Neologisms or incoherence
		(g) Catatonic behavior
		(h) "Negative" symptoms
Exclusion criteria	The disturbance is not attributable to the physiological effects of a substance	The criteria must have been met before the disturbance of mood developed
		The disorder is not attributable to organic brain disease or drug-related states

DSM-IV, Maj 1998). ICD-10 adds that schizophrenia spectrum disorders "form a heterogeneous and poorly understood collection of disorders" (ICD-10 "Blue Book," p. 86). Meehl (1990) refers to an apparently "strange cluster of "unrelated" phenomena." Table 8.1 compares the principle criteria for DSM-5 and ICD-10 schizophrenia.

The most prominent representatives of productive psychotic symptoms of schizophrenia are hallucinations and delusions. DSM-5 defines a *hallucination* as "A perception-like experience with the clarity and impact of a true perception but without the external stimulation of the relevant sensory organ" (p. 822; cf. p. 87). Schizophrenic hallucinations are said to be "vivid and clear, with the full force and impact of normal perceptions" (p. 88). However, the likeliness of schizophrenic hallucinations with perception is merely apparent. Wyrsch (1949) quotes Straus stating:

> So, the hallucinations do not arise from a disturbance of the sensorium—understood in the physiological sense—they do not either originate from a disorder of the functions of perception, thinking, judgment, but emerge from a disturbance and alteration of the sympathetic functions of sensation. Because these functions are changed, the patient lives in a different communication with the world. However, since these modes of being in the world are fundamental to all experiences, the hallucinations are not isolated disturbances. (Wyrsch 1949, p. 35–36, our translation)

Emphasizing the likeliness of hallucinations with true perception is erroneous, especially in the case of schizophrenic hallucinations, which is established by several facts: patients reporting an indefinable character of the voices (e.g., cannot describe them as male or female), the existence of so-called extracampine hallucinations, i.e., arising outside the perceptual field (voices from another house, visions through the floor), and some patients having "soundless" voices (Bleuler 1950, p. 110; Henriksen et al. 2015). Still other aspects differentiate schizophrenic hallucinations from perception: their inescapable givenness, the omnipresence, experiencing them in another space or dimension, their private character (patients seldom expecting others to have access to them), etc.

The thematic content of schizophrenic hallucinations is often neutral in the sense of affective charge, as in commenting voices, but affective hallucinations are very common in schizophrenia, too. Derogative voices, corresponding to the PSE definition of "depressive auditory hallucinations," have been found to occur more often in schizophrenia than in other diagnostic categories (Goodwin et al. 1971).

DSM-5 defines a *delusion* as "A false belief based on incorrect inference about external reality that is firmly held despite what almost everyone else believes and despite what constitutes incontrovertible and obvious proof or evidence to the contrary" (p. 819; cf. p. 87). In case of schizophrenia, this definition is incorrect in almost all of its components. Schizophrenic delusions are not inferential beliefs, but they are primary, immediate, and not resting on other beliefs (Mullen and Gillett 2014), pathic rather than gnostic (a felt sense rather than an intellectual comprehension). Therefore, it is not a matter of incorrect inference but rather of convincing experiences, which may explain why highly educated patients may harbor irrational beliefs. And furthermore, schizophrenic delusions, not necessarily false, may contain an empirical truth. See also below.

With regard to the socio-dystonicity reflected in the DSM-5 passage, "despite what almost everyone else believes" and the SCAN exclusion from delusions of a belief "understandable in its social context" (SCAN 1999, p. 158), we must be aware of the possibility that the patient has actively sought out the specific subculture. Thus, if a patient is taking an interest in, say, Satanism as an expression of prodromal, existential change (see Sect. 8.5), his belief in Satan should not be considered a normal subcultural belief. In shared (or induced) psychosis (folie à deux), a deluded person induces a weaker person living closely together with him to share his delusions. The sociodystonicity principle cannot be applied here, either.

Bizarre delusions are, together with the first-rank symptoms, assigned the heaviest weight in the diagnostic algorithms of ICD-10 and DSM-IV (DSM-5 mentions

them under schizophrenic delusions). But the definitions differ: DSM-IV deems delusions bizarre "if they are clearly implausible and not understandable and do not derive from ordinary life experiences" (DSM-IV-TR p. 299), whereas ICD-10 writes: "Persistent delusions of other kinds that are culturally inappropriate and completely impossible (e.g., being able to control the weather, or being in communication with aliens from another world)" (p. 87). Cermolacce et al. (2010) have explored the concept of bizarre delusion, which originated in the Research Diagnostic Criteria (RDC, Spitzer et al. 1975) and the DSM-III of the early era of operationalism, inspired by classical descriptions of bizarreness in schizophrenia, reflecting the autistic-solipsistic structure (see below). By forming an operational definition of bizarre delusions, the specificity seems to be lost, and, as DSM-IV concedes, "bizarreness" may be difficult to judge, especially across different cultures" (p. 275). A few empirical studies have been performed exploring the reliability of the concept according to different definitions. In some cases clinicians agree on bizarreness or non-bizarreness, but in others, such as the following, they disagree:

> A 56-year-old woman had the delusion that her husband's family blamed her for his death some 20 years ago. They had hired a lawyer and were going to take her to court, where she would be sentenced to death. Members of the family followed her wherever she went and, using some sort of electronic device, continuously informed her of their plans and made threats. (Spitzer et al. 1993)

This example involves technology that has become possible by now but may have been impossible then. The reliability of bizarre delusions appraised in these studies is insufficient or barely acceptable (Cermolacce et al. 2010), a fact that has contributed to their omission from DSM-5. Delusions fulfilling the criteria of bizarre delusion may actually be found in other diagnostic categories as well, such as the nihilistic delusion of being dead as part of Cotard's syndrome in melancholia (see also Sect. 9.2.1).

The concept of bizarre delusions seems to be founded on Kraepelin's description of schizophrenic delusions as 'nonsensical' and Jaspers' as 'incomprehensible' (Cermolacce et al. 2010). Jaspers differentiates between primary or true schizophrenic delusions, or delusions proper, and secondary delusions or delusion-like ideas of other diagnostic spectra.

There are three areas of FRS: delusional perception, passivity phenomena, and certain types of auditory hallucinations. In clinical practice, they are not always used in a correct way. Delusional perception (Wahnwahrnehmung) belongs to the class of primary delusional ideas viewed as specific, "true" schizophrenic delusions by Jaspers (1997). The term refers to a sudden, usually referential, meaning of an apparently neutral perception, often preceded by delusional mood (see Sects. 8.4 and 8.5). Schneider emphasizes the two-component (zweigliedrig) nature of delusional perception, the one being the neutral perception and the other the delusion. In this model, the connection between the two is incomprehensible, but as we will see later (Sect. 8.5), there is an idiosyncratic, referential meaning of the perception.

Table 8.2 Division of delusions: column-wise overlapping delusional concepts

Autistic-solipsistic delusions	Empirical delusions
"Primary" or "true" delusion (Karl Jaspers); delusional atmosphere	"Secondary" delusions or *wahnhafte Ideen* (Karl Jaspers) following more primary phenomena: e.g., a delusion of poverty as a consequence of a melancholic mood change
Delusional perception (Kurt Schneider)	Perceptually or memory *triggered* delusion (e.g., a specific perception evokes a new delusional content in an already paranoid patient)
Bizarre delusions (DSM-IV, ICD-10): content considered as empirically or physically impossible and resistant to empathic understanding	Non-bizarre delusions: the so-called "understandable" delusion such as mood-congruent delusions in depression

Adapted from Parnas (2004), Table 1

Parnas (2004) elaborates Jaspers' distinction between primary or true schizophrenic delusions and secondary delusions or delusion-like ideas of other diagnostic spectra (see Table 8.2). The former, called autistic-solipsistic delusions, related to delusional mood and delusional perception, originates directly in the special mode of experiencing in schizophrenia, and the latter, called empirical delusions, like those in depression, are mood-congruous and "understandable" from the depressive state. The empirical nature of the latter group of psychoses is particularly evident in paranoid patients trying to "prove," e.g., the presence of parasites by the aid of lint collected in a matchbox, or bugging inferred from observations:

> A young woman thinks that her apartment is being bugged by the police, intelligence service, and her former colleagues. She has observed people in the street stopping short and looking at her. She has been searching a lot of different things on the Internet, which she thinks may have attracted the attention of the authorities.

The schizophrenic delusions refer to a different ontological dimension. They concern the general metaphysical status of the universe rather than objects or events existing within it (Sass 1992b). Patients living in this dimension and simultaneously in our shared world will display double orientation (see above), as the two dimensions never seem collide, and they will seldom bother to prove their delusional allegations like the "empirically" deluded patients. The difference between the two views is illustrated by Janet objecting to his patient Madeleine claiming to levitate by a divine miracle when she was actually only tiptoeing. Madeleine replied:

> Dr. Janet wants absolutely indisputable signs; he does not want to hear about this ascension as long as I shall not be hanging a quarter of an hour before him with the tips of my feet 10 centimeters above the ground. What a strange idea to apply measurement in divine matters! As if the miracle was not just as big by one millimeter. (Janet 1926, p. 146, our translation)

Like bizarre delusions, the presence of one *first-rank symptom* (FRS) results in a schizophrenia diagnosis according to ICD-10 and DSM-IV, the duration and

exclusion criteria being fulfilled. And like bizarre delusions, these have been omitted from the diagnostic algorithm in the DSM-5, too. Originally coined by Kurt Schneider (1939) as a simple list of symptoms of great (first-rank) importance for the diagnosis schizophrenia written for general practitioners, FRS were eventually incorporated into RDC (Spitzer et al. 1975) and DSM-III via Present State Examination (PSE 1994), in a situation when reliable symptoms were needed for the diagnostic algorithms. Schneider's own description of the symptoms was rather sketchy as they were all well-known psychopathological phenomena at that time (see also Mellor 1970). The later use of FRS has varied from one author to another, some including a phenomenon, others not (Koehler 1979). FRS, as they are currently defined, are not supported by empirical evidence, and it has been suggested that they should be de-emphasized for the present (Nordgaard et al. 2008), a fact contributing to their omission from DSM-5.

Passivity phenomena have in common the experience of self-alienation and loss of autonomy and of an external force taking over, controlling, inserting, or removing thoughts, feelings, bodily sensations, action, etc. For example, thoughts are experienced as "made" (*gemacht*) by someone or something outside the patient. The central part of the experience is a feeling of passivity and of simultaneous *transitivism* (see the next section), i.e., of the self-demarcation being crossed. An explanatory delusion will usually evolve as to who is in control and how it is brought about. In operational definitions, the primary passivity experience is neglected in favor of a secondary, less specific, explanatory delusion: "I believe that my neighbor has stolen my thoughts." Such beliefs may be found in any psychosis. This kind of psychopathological broadening may be responsible for the relative nonspecificity of passivity phenomena in empirical studies. Passivity phenomena, no longer integrated in the DSM-5 diagnostic algorithm as in DSM-IV, are now classified as bizarre delusions. Another source of nonspecificity, resulting from superficial questioning, is the psychopathological misinterpretation of "control" as a psychological phenomenon, i.e., the patient obeying dominant others.

Audible thoughts (*Gedankenlautwerden*) are a special case of passivity phenomena sometimes causing difficulties for clinicians. What is meant here is a phenomenon closely related to thought broadcast, the experience that other people have direct access to the patient's thoughts or feelings. In audible thoughts, the patient experiences his thoughts being spoken aloud and heard by others, in some definitions it is added, if standing close to him. This is an unfortunate formulation, as schizophrenic experiences have a different spatial structure, as illustrated by the so-called extracampine hallucinations perceived outside the perceptual arena, e.g., watching somebody behind oneself or hearing a voice from another country.[2] One variant of audible thoughts is voices speaking the patient's thoughts immediately after, or even before, they are thought, also known as *thought echo* (Mellor 1970). The FRS, audible thoughts, should be distinguished from the nonpsychotic version,

[2] The term has sometimes been used erroneously for the feeling beyond the range of sensory perception of being accompanied by another being (e.g., Chan and Rossor 2002). This should rightly be termed *leibhaftige Bewusstheit* (vivid awareness) or *Anwesenheit* (presence). See also below.

perceptualization of inner speech or thoughts (Parnas et al. 2005a), in which thoughts or inner speech acquires acoustic qualities but without the patient feeling that others can hear or have access to them. Thought echo is part of the ICD-10 criteria for schizophrenia, but not of the DSM-IV criteria. A nonpsychotic counterpart of thought echo is the silent thought echo, a feeling that one's thoughts are automatically repeated (Parnas et al. 2005a).

The hallucinatory symptoms of the FRS are *commenting voices*, giving a *running commentary* on the patient's behavior ("Now he is standing at the window thinking"), or *discussing voices*, discussing the patient among themselves, often referred to as "third-person hallucinations." This is another unfortunate formulation since Schneider never mentioned the "third person," and commenting voices can actually be heard in the second person. We have even seen one example of "first-person" commentary, as it were, a patient hearing a voice saying things like, "Now I am sitting here reading," while she was reading, *pretending* to be her. It is also unfortunate because there are third-person hallucinations which are *not* FRS, e.g., voices commenting on the patient's looks or personal qualities ("She's ugly… she's lazy").

Hallucinations in any modality of perception are common in schizophrenia, including, e.g., visual (Waters et al. 2014) and olfactory hallucinations sometimes considered indicators of organic psychosis. ICD-10 attaches the same importance to voices coming from some part of the body as to first-rank symptoms and bizarre delusions.

The introduction of the operational definitions of schizophrenia saw the emergence of the positive-negative symptom dichotomy, later supplemented with disorganization. *Negative symptoms* (alogia, anergia, anhedonia, etc.) are behaviorally defined signs, sometimes defined as "a diminution of what would normally be present" (quoted by Sass 2000). They are often taken to indicate a paucity of psychological activity or subjective life. Andreasen (1997) argues that Bleuler's fundamental symptoms were in fact negative symptoms, although he never used the term, and among these she mentions the "*loss* of the continuity of associations" (our italics; Bleuler's own term: associational disturbance). Sass demonstrates, however, that it is impossible to separate the positive, negative, and disorganized symptoms: in one case, thought blocking (a diminution) was the result of an excess of thoughts. We often see inactivity resulting from ambivalence and perplexity, e.g., one patient complaining that putting on his clothes is so confusing because of too many choices. Exclusively focusing on the outcomes of functional behaviors, negative symptoms ignore their causation or motivation (Stanghellini 2004a, p. 71ff.).

Negative symptoms overlap with just as nonspecifically defined depressive symptoms of instruments like the SCAN (1999), and they can only be rated in the depression section of this instrument (see also Sect. 9.2.4 on depressive-like states in schizophrenia). The differential diagnosis will depend on the psychopathological context. The SCID instrument (2014) does allow rating alogia, avolition, and affective flattening under the headline "Negative symptoms."

Catatonia constitutes a rather heterogeneous group of expressive motor phenomena. The expressivity of catatonia is treated in depth in Sect. 5.3.1. Kahlbaum's (2012 [1874]) disease of that name, later to be included in Dementia praecox

(schizophrenia) by Kraepelin, was defined by increased muscular tension (*Spannungsirresein* or tension insanity) exemplified by catalepsy. Severe catatonia is a criterion of schizophrenia in DSM-5 (grossly disorganized or catatonic behavior) and ICD-10 (catatonic behavior, such as excitement, posturing or waxy flexibility, negativism, mutism, and stupor). Maj (1998) criticizes the weight given to disorganized behavior as a catatonic symptom, which may lead to a schizophrenia diagnosis in case of deviant behavior of a different nature (such as in mania or dementia).

Catatonic *excitement* may cause difficulties for the differential diagnosis (also see Sect. 11.1.4).

DSM-5 allows comorbid catatonia, here established as a separate, albeit not independent, diagnosis (being secondary to other mental or medical conditions, p. 119), whereas ICD-10 has a catatonic subtype of schizophrenia. Mild catatonic manifestations like stereotypies and parakinesia (see Sect. 5.3.1) do not count as schizophrenia criteria, although they are probably indicative of the spectrum.

The nosological position of catatonia is somewhat controversial: some cases seem to belong to mood disorders, some are caused by brain damage (Cutting 1985, p. 382) or are drug-related, and there is at least some evidence of an independent nosological entity, episodic catatonia (Fink and Taylor 2009). However, the specific quality of some manifestations seems of importance for the differential diagnosis. The *schizophrenic stupor*, probably related to perplexity, is characterized by rigidity, while in *depressive stupor*, expressive of severe psychomotor retardation (and a criterion of ICD-10 severe depressive episode with psychotic symptoms), there is no change in muscle tone. Furthermore, schizophrenic stupor is said to be characterized by a "dead-pan" facial expression, as opposed to a depressive facies, and by stereotypies and incontinence of urine absent in depressive stupor (Fish 1974, p. 104).

8.3 The Clinical Core Gestalt of Schizophrenia

Descriptive psychiatry since Kraepelin and Bleuler has consented to the delineation of a core Gestalt of schizophrenia underlying all productive symptoms of psychosis. In Bleuler's model it is named the fundamental symptoms as opposed to the productive accessory symptoms. Bleuler found these fundamental symptoms present in every stage of illness irrespective of the presence of accessory symptoms and therefore also present in schizoid (i.e., schizotypal) cases. Only in the wake of operationalism, this core Gestalt seems to be lost from psychiatry (Parnas 2011) and replaced by nonspecific negative symptoms. Bleuler's *fundamental symptoms* (1950) are chiefly defined as behavioral signs. Referred to in shorthand as the "four A's," the original structure is more complicated. In addition to autism, ambivalence, and disorders of affect and association (formal thought disorder), they include, among others, also disorders of the person (self-disorder). It should be emphasized that autism here has nothing to do with the autistic spectrum; the word happened to be borrowed from schizophrenia to this group of developmental disorders (see also Sects. 8.9 and 13.2). For the expressive aspects of the fundamental symptoms, see Chap. 5 and Sect. 8.12.

Autism is defined by Bleuler as a "detachment from reality, together with the relative and absolute predominance of the inner life" (1950, p. 63). This is a problematic definition for two reasons: the autistic patients are not always withdrawn, and they do not always have a rich inner fantasy life (Parnas et al. 2002). The withdrawal, if present, is called secondary autism, a compensatory measure. The concept of autism was redefined by Minkowski (2002) to mean a loss of vital contact with reality (or vital connectedness with the world, Sass 2001) which he saw as the generative disorder of schizophrenia. The morbid rationalism characteristic of schizophrenic thinking is a hyper-rationalism deprived from this flexible vitality. Minkowski distinguishes between poor autism, which is the pure loss of contact with reality, and rich autism, which is the absorption in an imaginary world. Blankenburg (1971, 2001) describes the autism as loss of common sense, or loss of natural self-evidence, exemplified with his case, Anna, who says she lacks "a natural understanding for what is a matter of course and obvious to others."

The experiential aspects of autism comprise disturbances of intentionality (e.g., loss of meaning and perplexity), in the realm of self (an unstable first-person perspective) and of the dimension of intersubjectivity (disorders of social and interpersonal functioning) (Parnas et al. 2002). Intentionality here means directedness toward objects, events, or states of affair. The naturalness of the world and other people is lacking (Parnas et al. 2005a):

> Sometimes I didn't understand what was happening, the group dynamics, hello, what's going on. It could just as well have been in Russian or Hebrew … the quite ordinary ways of being together with other people in a group astonished me really. I didn't understand why people were behaving the way they did, and I was unable to do so myself.

This loss of natural evidence may lead to *hyperreflectivity* (ibid.), a tendency to reflect intensively on aspects of oneself or of the environment.:

> It has grown more difficult for her to understand the meaning of words, which she analyzes into the finest details with so many different meanings and values that communication between human beings can hold… She dissects everything: why do we live if we are all going to die eventually anyway?

Perplexity, as also illustrated by the above example (quoted from one of our patients), refers to the experience of being unable to grasp the contextually relevant meaning (Henriksen et al. 2010; Störring 1987; for the expressivity of perplexity, see Sect. 5.9). It is often accompanied by feelings of confusion and anxiety. The schizophrenic perplexity is essentially different from delirium and the clouded state of mind in some acute psychoses referred to as "perplexity" in the DSM (not further defined): unlike these states, there is no disorientation or clouding. *Ambivalence*, an inability to decide between two or more options of often simple and everyday character, is closely related to perplexity (Parnas et al. 2005a):

> She spends a lot of time thinking things over. Once it took her half an hour to choose the right pencil for drawing mathematical graphs. She has difficulty in choosing food from a buffet because she cannot make the foods go together. She hates to be presented with different drinks to choose among.

Self-disorders (or disorders of self-awareness), the experiential counterpart of Bleuler's expressive fundamental symptoms, together forming a psychopathological Gestalt, appear to be a fundamental or even constitutive phenotype of the schizophrenia spectrum disorders (Parnas and Henriksen 2015). Empirical studies indicate that self-disorders aggregate selectively in the schizophrenia spectrum (Parnas et al. 2003; Haug et al. 2012) and they can be demonstrated in all phases of schizophrenia and in schizotypy (Handest and Parnas 2005; Raballo and Parnas 2011). They can even be demonstrated in nonclinical samples, particularly frequently in individuals with pronounced schizotypal traits (Torbet et al. 2015).

In self-disorders the basic sense of self appears to be fragile, oscillating, and constantly threatened. The core self, or basic self, a prerequisite for the personal or narrative self, is affected. On this core-self level, patients often report not to know who they are or to feel profoundly different in kind from others. On the narrative level, these patients consequently "feel insecure" or "lack self-confidence" (like patients with personality disorders, but only schizophrenia spectrum patients have the disorder on the core-self level; see Chap. 12). There is a loss of first-person perspective, the patients becoming observers of themselves (loss of ipseity or sense of self). Awareness loses its natural transparency, and feelings and thoughts are being objectified and spatialized, e.g., as audible thoughts. The following video transcript expresses typical statements from a schizophrenia spectrum patient:

> I find it very hard to make out who I am and how I am. I am insecure and irresolute. Shopping is a nightmare for me, I spend incredibly long time deciding what to buy and choosing between the different kinds of milk. I have to consider all possibilities. I wonder why we are placed on this earth, why we are here. I am intensely concerned about sitting right, observing myself while acting automatically like a robot. When writing it is as if there is no contact between me and my hand, and I cannot always recognize what I have written as something coming from me.

Further aspects of self-disorder are transitivism and solipsism. *Transitivism* is a loss or permeability of self-world boundary (or a loss of self-demarcation). The term was originally coined by Bleuler for psychotic phenomena, some of which were later to be classified as passivity phenomena of the first-rank symptoms by Schneider. Koehler (1979) has drawn up a range of experiences constituting a "passivity continuum" stretching from passivity mood, an experience of something impinging upon the integrity of the self (see Sect. 10.1), to overtly psychotic first-rank symptoms. Examples of the nonpsychotic variants of this self-disorder are a feeling of being read and of mixing oneself up with the interlocutor. *Solipsism* (or quasi-solipsism) is an experience of being a unique subject in the world with a feeling that the experienced world is not truly real and of having extraordinary insight in the world. This phenomenon is also the source of schizophrenic grandiosity and of double orientation (see also Sects. 8.1 and 8.2). In double orientation, the patients live in two ontological dimensions, a private one and a shared one; the private dimension has a solipsistic structure. Schizophrenic delusions have an autistic-solipsistic character (cf. Table 8.2).

EASE (Examination of Anomalous Self-Experience, Parnas et al. 2005b)) is a scale for the assessment of self-disorders. The self-disorders, informed by phenomenological philosophy, overlap with the empirically collected basic symptoms of the BSABS (Gross et al. 2008) and SPI-A instruments (Schultze-Lutter et al. 2007), which also comprise vegetative and perceptual phenomena, not included in the EASE (as they are not self-disorders). Together they constitute the subjective, nonpsychotic experiences of the schizophrenia spectrum. The subjective experiences are often described with an *as if* (Parnas and Henriksen 2015) due to the patients' intact reflective reality judgment. However, the pure phenomena themselves cannot be characterized as "as if" experiences, only the attempts at thematizing or explaining them: "It feels as if people are looking at me, as if I were 10 feet tall." In the transformation of these phenomena into psychotic (e.g., first-rank) symptoms, a psychotic (not as if) thematization is taking place. However, we must be aware that "as if" may sometimes refer even to psychotic experiences, when a patient in retrospect tries to dissociate himself from them, e.g.: "At that time it was as if everybody was watching me, and that is why I fled."

8.4 Near-Psychotic Phenomena

A number of psychopathological phenomena assume an intermediate position between the subjective, nonpsychotic phenomena (including self-disorders) and full-blown psychosis (Jansson 2015). Like psychosis, these phenomena can be seen as a transient failure of either the implicit or the theoretical rationality (see Sect. 8.1). Near-psychotic phenomena abound in the schizophrenia spectrum but are also seen in other psychosis spectra with qualitative differences of importance for the differential diagnosis. In the absence of manifest psychosis, these phenomena are often ignored or misunderstood. It is therefore of great importance for the recognition of especially symptom-poor cases of the schizophrenia spectrum (e.g., schizotypy and prodromal states) to be familiar with them. The near-psychotic phenomena involve areas like ideation, imagination, anxiety, perception, and action. Many of the near-psychotic phenomena are associated with social anxiety, defined as anxiety,

Table 8.3 Near-psychotic phenomena

Misinterpretation:
Paranoid ideation, delusional mood, self-reference, Anwesenheit
Obsessive-like phenomena and idiosyncratic acts:
Pseudo-obsessions and pseudocompulsions, overvalued ideas, magical thinking, morbid geometrism, crazy acts
Loss of demarcation:
Fear of closeness and bodily contact, other transitivistic phenomena
Perception-like and perception-related phenomena:
Perceptual distortion, unformed hallucinations, illusions, difficulty discriminating between intentional modalities, derealization, depersonalization

discomfort, or fatigue in social situations, and this section, therefore, overlaps with the social anxiety section of Sect. 10.3. The near-psychotic aspects will be elaborated in this section and the social anxiety aspects in Sect. 10.3. Table 8.3 shows an attempt at grouping the phenomena. The division should not be taken too literally as the phenomena overlap.

Paranoid ideation, a diagnostic criterion of schizotypal personality disorder (DSM-5 and ICD-10), designates a group of ill-defined phenomena with low degree of thematization: suspiciousness and vague ideas or feelings of being followed or watched. The intensity varies, typically peaking in certain situations such as walking alone in the street, sometimes as micropsychotic episodes. Meehl (1964) describes in schizotypy a paradoxical mixture of suspiciousness and mistrust on the one hand and a naive gullibility on the other, probably reflecting a loss of common sense. Paranoid near-psychotic or micropsychotic episodes are frequently seen in the schizophrenia spectrum reinforcing the trait-like distrust in others, e.g., in relation to self-reference or feelings of being monitored, often with a low degree of elaboration.

Shapiro (1965) demonstrates how paranoid personality (paranoid neurotic style) can lead to paranoid near-psychotic (and psychotic) reactions (see Sect. 12.3). Transient, stress-related paranoid ideation while threatened with abandonment forms a criterion of the borderline personality disorder in DSM-5 (but not ICD-10). In schizotypy, paranoid ideation is usually more pervasive and not restricted to stressful episodes while not yet reaching psychotic intensity.

Delusional mood (or delusional atmosphere, *Wahnstimmung*) is a feeling of "something in the air," a change in the sense of reality (see Sect. 8.1). It is not based on simple perceptual changes (objects have the same appearance as before), but it is a change in the perceptual field of everything, an all-encompassing change in the shape of experience and thought (Ratcliffe 2013). The part played by delusional mood is playing in beginning schizophrenic psychosis is explored in Sect. 8.5.

Self-reference is the experience of other people or external events referring to the patient. The phenomenon in its basic form is nonpsychotic, but there are also near-psychotic and psychotic forms. In the schizophrenia spectrum, there are two prominent varieties: episodic, primary self-reference related to self-disorders and delusional self-reference as part of delusional perception in emerging psychosis (see Sect. 8.5). *Primary* self-reference, an athematic, solipsistic experience of being the center of everybody's attention:

> In the street she feels that everybody is looking at her for no apparent reason. Is it because she has something in her face? She feels like pulling a black bag over her head. (Our example)

As can be seen in this example, the patient may attempt to explain the experience ("something in her face"), but this is not a true thematization of the experience itself. Primary self-reference is often combined with a transitivistic "as if" feeling of other people watching the patient can somehow see through or "read" her.

Kafka's novels often express this primary, athematic feeling of attention and hidden meaning, e.g., illustrated in the movie, The Process, in the scene where all passengers are watching Josef K from the passing tram. Many patients also recognize

the experience from the movie, The Truman Show, and there has even been coined a "Truman show syndrome." Self-reference forms one of the criteria of schizotypal personality disorder in the DSM-5.

Self-reference *secondary* to other mental states will have the thematic quality of these states. The paranoid patient feels, e.g., that people are watching her as if wanting to attack her, the depressive patient that others are looking reproachfully at her, the (hypo)manic patient that other are admiring her, and the self-insecure patient that others are looking at her as if they can see that she is incompetent. Even in the schizophrenia spectrum, we find secondary self-reference, often with themes of criticism, surveillance, or persecution.

Kretschmer (1974) describes the emergence of delusions of reference in sensitive patients (*sensitiver Beziehungswahn* or sensitive reference psychosis) with preservation of their personality and a tendency toward remission and thus without indication of a schizophrenic process.

Anwesenheit (German for presence) designates an unfounded experience of the presence of another being without perceptual changes or explanatory ideas. It often occurs in patients being alone at home, sometimes leading them to search the apartment. It may also occur in the street as a feeling of somebody walking right behind the patient. Anwesenheit is found in the schizophrenia spectrum, but some variants are also reported in bereavement (the presence of the deceased wife or husband) and in neurological and drug-induced conditions (Thomson 1982). "Presence hallucinations" are described in Parkinson's disease more or less like Anwesenheit, but, although "[not related] to a specific sensory modality" still with some visual component, as the patient may refer to imagery, e.g., "the image is behind me" (Fénelon et al. 2000).

Pseudo-obsessions are obsessive-like phenomena frequently appearing in the schizophrenia spectrum (Rosén Rasmussen and Parnas 2015; see also Sect. 10.4). True obsessions are repetitive thoughts and imaginations with unwanted, disastrous contents, which are ego-dystonic, and the patient therefore resists, often by means of compulsions having a rational, causal relation to the obsession (repeating security measures, checking). The patient considers the obsessions absurd and does not allow them to expand into ruminations or detailed imagination. The obsessions are not accompanied by emotions corresponding to contents (desire, anger, etc.). Pseudo-obsessions may depart from true obsessions in any of these aspects: they are more egosyntonic, frightening or accompanied by other strong emotions, imaginative, and elaborate (cf. Table 10.2). They may be more situational and changeable. The patient does not resist them at least as effectively as the true obsessions, and often they rather assume the character of rumination and fascination.

> Sometimes while looking at my cats I get a picture of them lying there with their throats cut and blood all over the place and it is obviously me who have done it. I don't know where it comes from.

Pseudo-compulsive acts may be seen as responses to (near-)psychotic ideas:

> A young woman harboring vague ideas of poison being added to her food had to rinse out cups and bowls repeatedly.

But often the compulsive-like acts are no longer causally related to the idea but are more like magical rituals taking shape of catatonic rituals:

> A young man fearing that his mother should die spent much of his time for four years making ritual movement to prevent it from happening, e.g., turning the handle of his cup in a certain direction. Another patient spent a lot of his time searching trash cans for dead infants lest he should have killed one.

In this way, obsessional phenomena make up a spectrum. True obsessions and compulsions are seen in obsessive-compulsive disorder (OCD), pseudo-obsessions and pseudocompulsions within the schizophrenia spectrum, and some other psychoses. DSM-5 allows the rating of poor insight in obsessions (thus transformed to pseudo-obsession) and absent insight/delusional beliefs. Unfortunately, it is all named OCD, tempting clinicians to broaden that diagnosis to include, e.g., schizophrenia, especially in symptom-poor cases (see the endogenous obsessive-compulsive disorder below).

Overvalued ideas are ideas which are excessive but socially accepted as reasonable. They are egosyntonic, as opposed to obsessions, and in agreement with the patient's personality and life experiences. Outside psychiatry we meet them as conspiracy theories and political, religious, and health ideas in certain subcultures. In psychiatry we find them in schizotypy, and a number of other syndromes: querulous paranoid states, morbid jealousy, hypochondriasis, dysmorphophobia, parasitophobia, and anorexia nervosa (McKenna 1984). Some of these may belong to the schizophrenia spectrum.

Magical thinking as noncausal thinking is prevalent in the general population as reflected in religious beliefs and interest in horoscopes. In obsessive-compulsive disorder, there may also be a magical component. Magical *experiences* are, however, more infrequent and, if not subculturally founded, often expressive of severe psychopathology. Magical thinking forms another criterion of schizotypy (DSM-5, ICD-10):

> "Odd beliefs or magical thinking that influences behavior and is inconsistent with subcultural norms (e.g., superstitiousness, belief in clairvoyance, telepathy, or "sixth sense"; in children and adolescents, bizarre fantasies or preoccupations)" (DSM-5), and a similar wording in the ICD-10.

Meehl (1964) clarifies the distinction between normal and pathological magical thinking:

> […] if a patient says "I always arrange the books that way before I leave my apartment, just to make sure that nothing happened," and further exploration shows that he really means this, i.e., he is making sure (rather than merely assuaging a tension by doing something he is perfectly clear is pointless and foolish)—then he has magical ideation and the sign should be checked as present.

Magical thinking accompanies pseudocompulsive rituals and solipsistic grandiosity (Parnas et al. 2005a):

> Since her early childhood she must turn the light on and off saying loudly "nobody will die! "She feels that she can transmit her thought to others thereby making them happy.

Morbid geometrism (Minkowski 2002, p. 138ff.) is a manifestation of loss of common sense seen in schizophrenia characterized by preoccupation with symmetry, physical order, mathematical principles, etc., having some resemblance to obsessive-compulsive phenomena:

> Everything must be symmetrical. When she got a tattoo on the one side of the body, she felt "wry" and had to get another one on the other side. She must have finger rings on both hands. If somebody touches her one arm, she must rub that arm but also the other one.

A sudden crazy act (*unsinnige Handlung*, see Sect. 5.1) may be the first indication of imminent psychosis. Apparently strange acts such as pathological journeys may also be motivated by delusional ideas (Eytan et al. 2007). After the fall of communist regime in Poland, a young man with schizophrenia, never before engaged in politics, fled the country in a rubber boat to seek political asylum in Denmark.

Fear of bodily contact (Parnas et al. 2005a) shows in various ways: the need of a "safe" distance to others (often stated as metric distance) and dislike of direct bodily contact (the patient avoids hugging friends, cannot have sexual intercourse), sometimes with a sustained tactile sensation that the patients feels like "wiping out":

> Hugging others is very unpleasant for me. I try to avoid doing so by just saying "hello" to everybody. It is as if they want something from me I can't give them, that they are taking away something from me like a jigsaw piece. Sometimes I can't even hold my boyfriend's hand.

The contact feels threatening for the patient's autonomy, and in more severe cases, the patient has a feeling of "losing" oneself or disappearing (Parnas et al. 2005b). Saks delivers this autobiographic description:

> Often when making love with Peter, I would suddenly get frightened, losing the sense of where I left off and he began. For a woman who's sure of herself, that sense of abandon, boundarylessness, ceding control, is primal and thrilling; in fact, it's at the very heart of the risk lovers take with each other. But for me, "becoming one" with a man felt like a loss of self and it was sometimes terrifying, as though something unspeakable lay just on the other side of it, as though I could fall into an abyss. (Saks 2007, p. 37–38)

This experience of "boundarylessness" is an example of *loss of self-demarcation*, or *transitivism*, a disorder of self-awareness. Transitivistic phenomena themselves form a spectrum (Koehler 1979) from passivity mood or feelings of being in a passive, dangerously exposed position, at the mercy of the world, to *passivity phenomena* (Schneiderian first-rank symptoms of alien control, insertion, withdrawal, replacement, transmission, etc.). In mild, not yet psychotic cases, patients have a vague feeling of being "read"—if convinced about it, we are dealing with *thought broadcast*, as in this example: "When I feel sensitive and transparent, I can't stop my thoughts from seeping into other people's mind." Another case of not yet

psychotic transitivism is the confusing feeling of mixing oneself up with the interlocutor: Whose feeling was that? Who of us watched the movie we are talking about?

Perceptual distortions (micropsia (objects appearing smaller), macropsia (bigger), poropsia (more distant), auditory, gustatory, and olfactory changes, etc.), seen in the schizophrenia spectrum (Gross et al. 2008)—being a schizotypal criterion—and in organic states, are generally recognized exactly as distortions by the patients and seldom interpreted psychotically. In affective illness, there is rather a change in the intensity of perception: a weakening in depression and an amplification in mania.

Unformed hallucinations occur frequently in prodromal schizophrenia, but also in certain neurological diseases (e.g., migraine). Elementary visual hallucinations (photopsias) are flashes of light, stars, colored spots, raindrops, and the like. Flashes of light may also be seen in eye diseases like vitreous detachment. Elementary auditory hallucinations (acoasms) are clicks or buzzing sounds of varying pitch and intensity—unlike tinnitus (Gross et al. 2008). The patients are seldom scared by these experiences which they refer to as "flashes" and "sounds." Half-formed hallucinations may be scarier: shadows and shapes at the edge of the field of vision or whispering, mumbling voices, and creaking sounds. Micropsychotic hallucinations may appear more formed, e.g., a voice calling one's name. Detailed visual hallucinations without delusional interpretation form part of the Charles Bonnet syndrome (see Sect. 7.1).

Illusions are misinterpretation of perceptions, e.g., seeing a branch as an arm. Jaspers (1997, p. 65) lists three types of illusions: illusions due to inattentiveness, illusions due to affect, and pareidolia (formed by imagination). Illusions form part of another criterion of schizotypal personality disorder (DSM-5) and schizotypal disorder (ICD-10, intense illusions also forming part of the micropsychosis criterion), and they are seen in other psychotic and near-psychotic states, e.g., drug intoxication. "Bodily illusions," in the operational criteria, seem to mean cenesthesias, bodily sensations (Gross et al. 2008).

Schizophrenia spectrum patients often report *difficulty differentiating between the experiential modalities* (Parnas et al. 2005a): dream, memory, fantasy, perception, etc. It seems to them that the doorbell rang, the dream last night really happened once, they are in doubt whether they themselves have experienced the story they were just told, and whether they spoke out loud or just thought silently. In these cases, the patients are not hallucinating but just in doubt of their own experiences.

Derealization is a transformation of the appearance of the surroundings without perceptual distortion (Parnas et al. 2005a). In fluid or global derealization seen in schizophrenia spectrum disorders, the significance of the surrounding world seems changed, and the world appears strange, lifeless, or constructed. In the schizophrenic prodrome, there is a loosening of the natural perceptual context, e.g., a railway station with all the objects belonging there (Matussek 1987). The whole is lost or rendered meaningless, and the patient only perceives fragments of the whole as detached objects which stand out with a new meaning, addressing themselves to the patient. The accentuation of the physiognomy of perceptual aspects is called

intrusive derealization (Parnas et al. 2005a). This is the starting point for delusional perception (Matussek ibid.).

Derealization is found in other diagnostic spectra, too. In the depressive derealization, the emotional quality of perception is lost completely, objects look blunt or dead, and space seems emptied (Fuchs 2014). Derealization is also seen in episodes of severe emotional distress, such as panic attacks, and under the influence of drugs.

Depersonalization is a heterogeneous group of phenomena. In the schizophrenia spectrum disorders, there is a loss of first-person perspective, i.e., the patient experiencing himself from a (phenomenological) distance, "in the third person" (like in grammar) with a loss of "myness" or "mineness," his own thoughts, feelings, and actions appearing impersonal, anonymous, or mechanically performed (Parnas et al. 2005a). The patient recognizes the thought contents as his own, and he has no ideas of thoughts being inserted into his head (as in the first-rank symptom, thought insertion). In schizophrenic somatic depersonalization, the body or some of its parts are perceived as strange, alien, lifeless, isolated, separated from each other, dislocated, or not existing (deanimation, Stanghellini 2004a). The melancholic depersonalization is of a different kind. The body is not experienced as strange or separated from the patient but lifeless or dead (corporealization), and inescapable, leading to nihilistic delusions of Cotard's syndrome (Stanghellini 2004a; Fuchs 2003; see also Sect. 9.2.1). Furthermore, in melancholia there is a psychic depersonalization in the form of a loss of feelings and emotional resonance. In states of strong affect (panic attacks, borderline crises), patients report out-of-body experiences, sometimes hallucinatorily watching themselves from the outside (heautoscopy, Brugger 2002), *dissociative depersonalization*. Depersonalization is found in various somatic and drug-related states, too (Bürgy 2012).

8.5 Transition to Psychosis

Several psychopathological aspects of the transition from the prodromal to the psychotic stages of schizophrenia have been explored in the descriptive and phenomenological literature. Psychosis emerges diachronically from the altered structure of experiencing, from autism and disordered self-awareness. The emergence of hebephrenia (disorganized schizophrenia) is treated in Sects. 8.6 and 13.1.

In paranoid schizophrenia, the outbreak of psychosis is preceded by a prodromal phase often distinguished by delusional mood (or delusional atmosphere) followed by primary delusions (renamed autistic-solipsistic delusions by Parnas 2004, see Sect. 8.2 and Table 8.2).

Delusional mood is described by Schneider (also naming it the *preparatory field*; 1959, p. 109) as an experience of oddness or even exaltation, often gaining a sense of something "significant" yet not defined. Conrad (1958) explains delusional mood as a change in the physiognomy of the surrounding world in the *trema*, the first stage of initial schizophrenia. The patient is alarmed by the emergence of strangeness, things no longer form reliable and familiar background for everyday experiencing but begin to vibrate from a disconcerting presence (Génnart 2011, p. 292). Matussek

(1987) describes an accentuation of perceptual aspects standing out as meaningful, addressing themselves to the patient (intrusive derealization: see Sect. 8.4, above). Fuchs points out that the synthetic and sense-bestowing processes in perception are disturbed, but at the same time, its physiognomic and expressive properties are set free; it is not merely a cognitive (gnostic) but a felt (pathic) component of perception that is disturbed.

Delusional mood turns into *delusional perception* by the way of self-referent thematization in *apophany*, Conrad's second stage of schizophrenia (Conrad 1958, 2012), which marks the end of the late prodrome and the onset of schizophrenic psychosis.

Conrad (2012, p. 181), referring to Matussek, elaborates this phenomenon: in beginning schizophrenia, there is a loosening or dissolution of the perceptual context, and there is expanded prevalence of the "essential properties" of the perceptual objects. In this process, the meaning of a perceptual object will be detached from the specific context, and all meanings (essential properties) inherent to the object will encircle it (like a "cloud" or "halo"): thus, "tree" can mean nature, firewood, habitat, hiding, etc. In the delusional perception, one such idiosyncratic, self-referent meaning will stand out. Prior to this, he describes a psychological tension, e.g., between external obstacles and personal wishes, in the early stage of the prodrome eventually leading to the thematic content of the referential psychosis. One patient, the German soldier Rainer, wished to become an officer but didn't have the mandatory school-leaving certificate. Hence, he wavered between the two possibilities—that he was being tested to become an officer anyway and he was going to be killed:

> When they had cheese with drops of fat, he thought they were letting him know that the cheese was "sweating", and that this meant that he had to exert himself (to be promoted)… Watching blood stains on the doctor's coat at the physical examination he believed he was going to be slaughtered like an animal. (Conrad)

And so, these "un-understandable" primary delusions prove to have a quite meaningful, albeit idiosyncratic, relation to perception.

Møller and Husby (2000) demonstrate a stepwise development in prodromal schizophrenia from the emergence of new ideas (religious mysticism, philosophy, etc., noted as existential change in the EASE manual, Parnas et al. 2005a; cf. Sect. 6.4), overevaluation, preoccupation with these ideas, withdrawal, and eventually psychotic extension. This development can be illustrated with a case by Parnas and Handest (2003):

> January 1985: "strange change is affecting him," feels "self-disgust," has "lost contact to himself." August 1985: increasingly preoccupied by existential themes and philosophy, "perhaps meditation could help." Increasingly isolated. January 1987: feels fundamentally transformed, "something in me has become inhuman," "no contact to his body," "feels empty," has to "find a new path in his life." January 1988: is of the opinion that Indians are superior compared to other human races; they perhaps have a mission to save our planet. September 1992: preoccupied by recurring thoughts about extraterrestrials. January 1993: convinced that Indians are reincarnated extraterrestrials. April 1994: feels that he is being

brought here each day from another planet in order to assist Indians in their salvatory mission. June 1994: first admission to a psychiatric ward, 24 years old.

Auditory and verbal hallucinations in schizophrenia are best understood not as abnormal perceptions, but as cognitive phenomena arising from a partial dissolution of the structures of self-consciousness, more specifically pathological changes in the experience of space (perspectivation,, world relation, and corporeality) and morbid objectification of inner speech (e.g., I-split; Henriksen et al. 2015).

Empirically, first-rank symptoms can be shown to evolve from rather nonspecific stage 1 basic symptoms (very similar to self-disorders) via intermediate phenomena (specific stage 2 basic symptoms) to final psychotic phenomena (stage 3) (Klosterkötter 1992), e.g., disturbances of perception or receptive speech (stage 1) leading via depersonalization and delusional mood (stage 2) to delusional perception (stage 3). Several such transitional sequences have been laid down.

Using a dynamic rather than a static approach to first-rank symptoms Koehler (1979) sets up provisional continua of phenomena within each of the three subtypes (Prägnanztypen), thereby indicating transitional sequences: a *delusional continuum* leading from delusional mood to delusional perception; a *passivity continuum*, from passivity mood to experiences of alienation (e.g., thought withdrawal and thought broadcast); and a *sense deception continuum*, from pseudo-hallucinatory (here meaning internal) voices to hallucinatory (external) voices.

8.6 The Course and Clinical Variation of the Schizophrenia Spectrum Disorders

Bleuler considered patients having fundamental symptoms as suffering from schizophrenia. His schizophrenia concept was therefore wide, also including latent cases, present-day schizotypes. Similarly, we may define the schizophrenia spectrum as comprising all patients, regardless of productive psychopathology, characterized by dissolution of self-structure, i.e., disorders of self-awareness. The spectrum covers cases of widely different severity and clinical form of presentation. Many of these pictures are not recognized by clinicians in general (often only recognizing paranoid schizophrenia) and are not even covered by any diagnostic criteria. Thus, symptom-poor cases tend to receive diagnoses expressing only the most salient clinical feature (e.g., social anxiety).

Basically, the spectrum can be viewed as being composed of two poles, nonpsychotic *schizotypy* and psychotic *schizophrenia*. Acknowledging the existence of subclinical cases, Rado (1953) introduced his model of the schizophrenia spectrum consisting of three levels: “compensated” schizotypy having very few symptoms and seldom considered patients; “decompensated” schizotypy, having a pseudo-neurotic symptomatology (cf. Hoch and Polatin 1949) fulfilling the diagnostic criteria for schizotypy and often leading to contact with health services;

and "disorganized" schizotypy being equal to schizophrenia. This model was endorsed and carried on by Meehl in his schizotaxia-schizotypy-schizophrenia model (1962, 1989, 1990). Schizotaxia is a putative neural integrative defect underlying the development of schizotypy. Parnas has suggested a fourth intermediate level to their model, semi-decompensated schizotypy, occasionally seen as patients (personal communication). An empirical study (Raballo and Parnas 2011) using self-disorders as a candidate vulnerability phenotype in a sample of nonpsychotic, genetically high-risk subjects demonstrates their distribution following an incremental pattern from non-patients to schizotypes, thereby supporting Meehl's model. The delimitation of schizophrenia from schizotypy is arbitrary. Around 40 different definitions of schizophrenia and related psychoses have been suggested in the course of the twentieth century, each having different psychopathological thresholds, frequencies, sex rate, etc. (Jansson and Parnas 2007). Polydiagnostic studies (ibid.; Berner et al. 1982) applying the criteria of different definitions to the same population show that they are overlapping but describing different subgroups.

A twin study (Torgersen et al. 1993) suggests that the "negative" DSM-III-R criteria of schizotypy, odd speech, inappropriate affect, odd behavior, and excessive social anxiety, more or less corresponding to Bleuler's mostly expressively defined fundamental symptoms, are significantly more common in co-twins and other relatives of schizophrenic probands, whereas the "positive" criteria appear to be nonspecific.

Hebephrenia-like types of schizotypy have been described by several authors. Kahlbaum (2002/1889) introduced his term, heboidophrenia (with the adjective: "heboid"), designating a mild mental illness in young people leading to antisocial behavior and resembling hebephrenia ("Jugendhalbirresein" or "half-hebephrenia"). This is probably the earliest description of schizotypy. Kretschmer has a similar subgroup of schizoid (schizotypal) patients named the "cold despotic type" or "moral idiots" (1925, p. 194ff.), sharing many of the characteristics with the "pseudopsychopathic schizophrenia" (Dunaif and Hoch 1955). These types of schizotypy are often mistaken for personality disorder, especially antisocial and borderline.

ICD-10 schizotypal disorder defines a productive and even near-psychotic state, whereas in DSM-IV and DSM-5, schizotypal personality disorder (SPD), as indicated by the name, is considered a personality disorder, and, therefore, micropsychotic episodes are left out from the criteria (but several near-psychotic phenomena are retained, anyway). In DSM-5 SPD is also mentioned in the schizophrenia chapter to indicate a relation to this disease. Schizotypy, as defined by these operationalized systems, may actually cover various clinical states: stable clinical schizotypy (corresponding to Rado's decompensated level), premorbid and prodromal schizophrenia (DSM-5 allows the addition "premorbid"), and a symptom-poor (subclinical, see below) variety of schizophrenia (simple schizophrenia is not covered by DSM). The latter two variants imply a deterioration from the premorbid condition. ICD-10 schizotypal disorder has a 2-year duration criterion, allowing such

Table 8.4 A comparison of schizotypal criteria

	DSM-5	ICD-10
	Schizotypal personality disorder	Schizotypal disorder
General conditions	A pervasive pattern of social and interpersonal deficits beginning by early adulthood	Continuous or repeated manifestations for at least 2 years
	Five or more criteria:	Four or more criteria:
Ideas of reference	Yes	No
Odd beliefs or magical thinking	Yes	Yes
Unusual perceptual experiences including bodily illusions	Yes	Yes
		Also including other illusions, depersonalization, or derealization
Odd thinking and speech	Yes	Yes
Suspiciousness or paranoid ideation	No	Yes
Inappropriate or constricted affect	Yes	Yes
Behavior or appearance that is odd, eccentric, or peculiar	Yes	Yes
Lack of friends and social withdrawal	Lack of close friends or confidants other than first-degree relatives	Poor rapport with others and a tendency to social withdrawal
Excessive social anxiety	Yes	No
Ruminations without inner resistance	No	Yes
Occasional transient quasi-psychotic episodes (micropsychoses)	No	Yes
Exclusion criteria	Does not occur exclusively during the course of schizophrenia, a bipolar disorder or depressive disorder with psychotic features, another psychotic disorder, or autism spectrum disorder	The subject must never have met the criteria for any disorder in F20 (schizophrenia)

prodromal and symptom-poor cases to receive the diagnosis, while cases with a shorter duration of symptoms fail to do so:

> A 28-year-old man at the emergency unit recounts alarming changes during the last 1½ years: social anxiety even with relatives and a cenesthetic feeling of his head shaking, which he names “a shaky head”. There is subtle formal thought disorder. He does not fulfill the diagnostic criteria for any schizophrenia spectrum disorder and is given a social anxiety diagnosis. One year later a persecutory psychosis breaks out.

DSM-5 SPD, defined as a personality disorder setting in by early adulthood, also fails to diagnose such cases. Table 8.4 compares the diagnostic criteria of the two diagnostic systems.

Schizophrenia is often depicted as a chronic illness with a "natural" deteriorating course (cf. Lewis and Lieberman 2000). The long-term outcome of schizophrenia was examined in several studies during the twentieth century (Häfner and an der Heiden 2003). Among these are prospective follow-up studies by Manfred Bleuler (over more than 20 years; Bleuler 1978) and by Ciompi and Müller (over 37 years; Ciompi and Müller 1976). The general picture is a great diversity of types of onset (acute, insidious), course (single episode, episodic, chronic), psychopathological profiles, and outcome. The proportion of recovered patients is between 21 % and 30 % in the major group of studies (Häfner and an der Heiden 2003).

Hebephrenia was first described by Hecker in 1871 (Hecker and Kraam 2009a, b). The description contained all basic features of future schizophrenia in nuce, and it was a major source for Kraepelin to his dementia praecox concept, as well as for Bleuler to his fundamental symptoms. Hecker envisaged hebephrenia to emerge from the psychological regeneration and transformation of the self in the "hobbledehoy stage" of the teenage years (*Lümmeljahre* in boys and *Backfischalter* in girls; cf. Stanghellini 2004b), but the temporal association of hebephrenia with puberty cannot always be demonstrated (as already pointed out by Daraszkiewicz in 1892 (2005)).

Blankenburg (1971) has explored the *symptom-poor varieties* of schizophrenia. The fundamental defect of schizophrenia, he writes, is the loss of natural evidence, an aspect of the loss of common sense underlying all schizophrenic psychopathology. These patients may appear unobtrusive with apparently nonspecific symptoms. Blankenburg demonstrates that such nonspecific symptoms may cover more specific, underlying phenomena. A trivial (nonspecific) complaint of fatigue turns out, on closer evaluation, to be caused by a pervasive inability to grasp the everyday significations of the world and a correlated perplexity (also an aspect of loss of common sense), hence "specific" (Parnas and Sass 2001). In the era of operationalization, this level of psychopathology is neglected.

In comparison with the almost universally accepted standard psychosis, paranoid schizophrenia, disorganized or hebephrenic schizophrenia is relatively symptom poor and, therefore, increasingly ignored and misdiagnosed, too. In the last 30 years, the percentage of such cases in Denmark has dropped from about 20 % to 30 % to less than 1 % (Parnas 2011). The question is what has happened to these patients. An informed guess is that they are re-diagnosed chiefly as borderline patients due to a superficial resemblance (impulsivity, self-destructive behavior, emotional instability; for the differential diagnosis, see Sect. 12.4 and Table 12.2) and that their discreet and fleeting psychotic symptoms are being played down, disregarded, or interpreted as "dissociative." But the proper reason seems to be even graver: the schizophrenic Gestalt has been lost from psychiatry. The problem that clinicians fail to recognize hebephrenia is not quite new; more than a hundred years ago, Wilmanns (1906) regretted that many petty criminal vagabond patients were not diagnosed until they had spent a long time in prison. Their diagnoses were mainly hebephrenic and catatonic *dementia praecox* (schizophrenia).

The first symptom-poor form of schizophrenia (also known as abortive or larvate schizophrenia or a *forme fruste* of schizophrenia) to be described, apart from the latent and hebephrenic forms, was the *simple form* (schizophrenia simplex; Diem 1903, 1987). This form has not been acknowledged by the DSM since the second edition. Although still part of the ICD schizophrenia definition, it seems to have suffered the same fate as the hebephrenic subtype, and if still in some use, it is reserved for cases developing severe negative symptoms. The original definition was, however, much broader. Diem found a number of features common to all these cases with an onset soon after puberty:

> [A]n individual becomes unstable, lacking in willpower and self-control, and wanders around aimlessly, often finishing up after a period of vagrancy in his home district. In many cases there is an unmistakable decline in performance, a narrowing of mental horizons and a restriction of thinking; they cannot carry out their former jobs adequately and have to be replaced because their work is unsatisfactory. A change in personality takes place, the most prominent feature of which is that an individual becomes more excitable and quarrelsome, often lascivious, and is never content, but finds something to criticise in everything… (Diem 1987)

No wonder, such cases are often misdiagnosed with personality disorder, but what is important here is the change in thinking and performance after puberty precluding a personality disorder. Diem's description of simple schizophrenia is a quite disorganized state that has a great resemblance with hebephrenia (Schneider regards them as the same type, 1959, p. 91). ICD-10 definition does, in fact, include these largely ignored hebephrenia-like features among its diagnostic criteria:

> A significant and consistent change in the overall quality of some aspects of personal behaviour, manifest as loss of drive and interests, aimlessness, idleness, a self-absorbed attitude, and social withdrawal. (p. 68)

Closely related to simple schizophrenia is what has been named the *evolutive schizoidia* (Ey 1996, p. 254), severe schizotypy with an aggravating course, or an "attenuated" form of schizophrenia. In rare cases, in which the psychotic phase has been overlooked, the clinical picture of residual schizophrenia is interpreted as simple schizophrenia (without such a phase). As negative symptoms have superficial likeness to depressive symptoms, the simple form of schizophrenia is often diagnosed as depression:

> A woman in her mid-twenties starts out her university studies but after a couple of years she grinds to a halt and fails to appear at the lectures. She cannot concentrate on reading and doesn't even manage to maintain her daily routines but spends most of her time in bed. She is treated with antidepressants as an outpatient for four years with little success. In hospital she doesn't give the impression of a true depressive mood. The psychological testing shows subtle formal thought disorder. She is diagnosed with simple schizophrenia.

For the differential diagnosis of schizophrenia and core depression, see Sect. 9.2 and Table 9.1.

A further number of subclinical forms have been identified (Huber et al. 1982; Gross 2001). *Cenesthopathic schizophrenia* was described by Huber (1957) and Huber et al. (1982) as a condition dominated by cenesthesias (bodily sensations; Dupré 1974; Gross et al. 2008): inexplicable pains, burning sensations, levitation feelings, motor weakening, kinesthesia, etc., closely connected with affective changes and vegetative, motor, and sensory disturbances. These complaints may persist for many years, first-rank symptoms and other manifest psychotic symptoms are transient or absent, and overt psychosis seldom evolves. The patient may appear hypochondriac, anguished, asthenic, or querulous and is often misdiagnosed.

The *endogenous juvenile-asthenic failure syndrome* (Glatzel and Huber 1968; Huber et al. 1982) usually starts before age 20 with cenesthesias and, after some time, the supervention of persisting or paroxystic depersonalization and derealization (mimicking psychomotor epilepsy, cf. Sect. 7.5.3) followed by subjective disorder of thinking (thought intentionality). This syndrome is more common in males. Half of the patients later become psychotic.

The *endogenous obsessive-compulsive disorder* (Gross et al. 1988), or malignant obsessive-compulsive syndrome, is characterized by severe egosyntonic obsessive-like phenomena difficult to distinguish from delusions and resistant to therapy. The age of onset in most cases is before 20, the course is progressive, and the prognosis is sinister. Obsessive-compulsive phenomena are discussed in Sect. 10.4.

In some cases, the subclinical forms turn out to be prodromal states as they are followed by a schizophrenic psychosis. *Prodromes* are initial phases of schizophrenia without psychotic symptoms, often with cenesthetic, neurasthenic, or depressive features. In about half of the cases, schizophrenia starts with a depressive prodrome, the initial depression (Häfner et al. 2005; Conrad 1958; see also Sect. 9.2.4). The duration ranges months to years. In some cases, the psychosis is preceded by a reversible prodrome-like phase, the *outpost syndrome*. This syndrome has been reported in 15 % of patients with schizophrenia, in average 10 years prior to the psychosis (Huber et al. 1979; Gross et al. 2008).

There is some clinical variation of schizophrenia across different cultures both with regard to course and psychopathology. In the WHO Ten-Country Study, schizophrenia patients in the developing countries were found to have a markedly better prognosis than patients in the developed countries (Jablensky et al. 1992). In another comparative study, Californian patients tend to hear voices with a violent content and think of themselves as crazy hearing voices, whereas West African and South Indian patients tend to experience their voices as positive and helpful (Luhrmann et al. 2015).

8.7 The Problems of Early Detection of Schizophrenia

The theory of toxicity of psychosis (Wyatt 1991) has informed research in the early detection of schizophrenia and other psychoses with the aim to reduce the DUP, duration of untreated psychosis. For the purpose of secondary prevention, detection of prodromal schizophrenia has been given high priority.

The ICD and DSM definitions of schizophrenia are arbitrary, resulting from expert consensus, and the time of onset varies depending on when the criteria threshold is exceeded: first-onset episodes by one diagnostic system may be considered pre-onset by a different system (Parnas 2005). The operational definitions (DSM-IV and ICD-10) rely heavily on manifest, less specific psychotic symptoms, including first-rank symptoms, whereas the preoperational definitions reflect to a greater extent the schizophrenic Gestalt.

In DSM-IIIR (p. 194–195) prodromal symptoms (identical with residual symptoms) comprise a list of nine mostly behavioral signs, at least two of which must be present for a prodromal phase of schizophrenia:

1. Marked social isolation or withdrawal
2. Marked impairment in role functioning as wage earner, student, or homemaker
3. Markedly peculiar behavior
4. Marked impairment in personal hygiene and grooming
5. Blunted or inappropriate affect
6. Digressive, vague, overelaborate, or circumstantial speech, or poverty of speech, or poverty of content of speech
7. Odd beliefs or magical thinking, influencing behavior and inconsistent with cultural norms, e.g., superstitiousness, belief in clairvoyance, telepathy, "sixth sense," "others can feel my feelings," overvalued ideas, ideas of reference
8. Unusual perceptual experiences, e.g., recurrent illusions, sensing the presence of a force or person not actually present
9. Marked lack of initiative, interests, or energy

Empirical studies have found a high prevalence of these items in high-school students rendering them nonspecific and of little value for prodromal research (McGorry et al. 1995; see also Sect. 13.1). The prodrome is identified retrospectively. An observed change in psychopathology and functioning in a patient displaying schizophrenia spectrum features might also be expressive of an accidental crisis, drug use, and an outpost syndrome (see above) or be the onset of a symptom-poor schizophrenia (e.g., simple subtype), and it may be difficult to tell them apart. In prodromal research, the term "at risk mental state" (ARMS) is, therefore, preferred to "prodrome" (Yung et al. 1996).

Early detection instruments attempt to define prodrome/ARMS operationally. The CAARMS (Yung et al. 2006) define ARMS in three ways: states (1) family history of psychosis or SPD plus 30% drop in SOFAS (Social and Occupational Functioning Assessment Scale, Goldman et al. 1992), (2) attenuated psychosis defined from subthreshold intensity and frequency ratings of psychosis items, and (3) BLIPS (brief limited intermittent psychotic symptoms), defined as a psychopathological scale score, resolving spontaneously within a week occurring during the last year. The first group is not clinically but probabilistically defined, the two next groups defined as subscale ratings. Psychosis, too, is defined as a cutoff score in certain subscales.

Early detection using near-psychotic or brief psychotic features centers on the late-prodromal, prepsychotic phase and is liable of becoming tautological (mild

psychosis predicting severe psychosis). The *attenuated psychosis syndrome* of DSM-5 (p. 783), a "condition for further study," constructed along this line as an attempt to capture the schizophrenic prodrome, seems to have a prevalence in general population of no more than 0.3 % (Schultze-Lutter et al. 2014a). The suggested diagnostic criteria comprise delusions, hallucinations, or disorganized speech "in attenuated form, with relatively intact reality testing, but of sufficient severity or frequency to warrant clinical attention." Furthermore, the symptoms must have begun or worsened in the past year. Without this onset criterion the prevalence would rise to 2.6 %.

A more promising approach is related to the occurrence of self-disorders, reflecting the fundamental generative disorder of schizophrenia spectrum disorders, which aggregate selectively in schizophrenia and schizotypy (Parnas et al. 2005a, b). Self-disorders predict transition to psychosis in an ultra high risk for psychosis sample (Nelson et al. 2012), and they predict transition to the schizophrenia spectrum in first-admitted non-schizophrenia spectrum patients (Parnas et al. 2011). Some of the cognate basic symptoms have been included in the CAARMS instrument.

For "psychotic-like experiences" (PLEs), see Sect. 8.10.

8.8 Other Non-affective Psychoses

This section deals chiefly with chronic non-affective psychoses; acute nonorganic psychoses apparently without relation to either the schizophrenic or the affective spectra are relegated to Sect. 11.2.

The delusional (paranoid) psychoses, having structured delusional systems as the salient feature, constitute a major subgroup of these psychoses. They are characterized by the absence of the fundamental disorders of schizophrenia, and their delusions are of "empirical" (rather than autistic-solipsistic) nature (Parnas 2004; see above). A number of monothematic paranoid syndromes have been described, Capgras, Fregoli, and de Clérambault's syndromes, hypochondriac paranoia, etc. In *de Clérambault's syndrome*, or erotomania, the core delusion is the belief that a certain person with higher status is in love with the patient. Delusional hypochondriasis will be treated in Sect. 10.5. *Capgras* and *Fregoli syndromes* are misidentification syndromes, the former "hypo-identification" (disclaiming the identity of relatives) and the latter "hyperidentification" (identifying strangers as the same person in disguise). Conrad describes further variations of misidentification in initial schizophrenia (2012); the delusional theme itself is of little use for the differential diagnosis.

Pauleikhoff (1969) lists a series of atypical psychoses (some of which probably not belonging to the schizophrenia spectrum) such as episodic stupor, episodic catatonia, and amorous paranoia. The DSM-5 now allows the diagnosis of catatonia as a comorbid diagnosis to other mental disorders or medical conditions.

Late paraphrenia as an independent nosological entity is controversial. Most cases seem to be schizophrenic. Schizophrenia may have its first appearance at any age but it is generally accepted that the onset after age 60 is very rare ("very late onset"). What distinguishes very-late-onset schizophrenia from earlier-onset cases

is a lower score of formal thought disorder, affective blunting, and social withdrawal; a higher score of visual hallucinations, persecutory symptomatology, and hearing loss and ocular pathology; and a high female-male ratio (Howard et al. 2000; Harris and Jeste 1988; Sato et al. 2004).

8.9 The Differential Diagnosis of the Autism Spectrum

The differential diagnosis of the so-called autism spectrum is particularly difficult, and the relation between the two spectra is still not as yet settled (Hommer and Swedo 2015). The actual name, autism, was borrowed by Kanner and Asperger from Bleuler's fundamental symptom, representing a loss of contact with the world, to designate certain childhood conditions, characterized by impairment in social interaction. Kanner (1943) and Rutter (1968) pointed out some further characteristics of his autistic children: a delay in the acquisition of speech together with language abnormalities, an excellent rote memory, and an obsessive desire for the maintenance of sameness.

The spectrum is made up of high-functioning autists (such as Asperger cases) as well as low-functioning autists, often having mental retardation. DSM-IV includes three autism diagnoses: autistic disorder, Asperger's disorder, and atypical autism (under pervasive developmental disorder not otherwise specified). In DSM-5, they have been combined into one diagnosis, the *autism spectrum disorder*. In ICD-10, the autistic diagnoses, childhood autism, atypical autism, and Asperger's syndrome are located under pervasive developmental disorders.

The psychology of the group of low-functioning autists is, for obvious reasons, much more difficult to penetrate, and it is therefore doubtful whether they represent psychopathologically the same fundamental disorder. The spectrum is in all probability a ragbag of cases having serious contact disturbances in common. The autistic patients have severe difficulty in relating themselves to other people, which may be of a quality similar to that seen in the schizophrenia spectrum, and some patients given the autism diagnosis certainly appear to belong to the schizophrenia spectrum. In a sample of 26 adult patients manifesting symptoms of autism spectrum disorders, 22 had psychotic symptoms, and 16 fulfilled the criteria for schizophrenia (Raja and Azzoni 2010), which demonstrates the clinical misuse of autism diagnoses even in cases of overt psychosis. Autism spectrum symptoms are more frequent in genetic disorders (such as Rett's and Cohen's syndromes) than in the general population (Richards et al. 2015) and are found in metabolic syndromes, too.

What has been pinpointed as characteristic for the special quality of autism in the autistic spectrum is the impairment or loss of *theory of mind* (a term originated in primatology in the late 1970s). Baron-Cohen et al. (1985) define it as a meta-representational capacity necessary for imputing beliefs to others and predicting their behavior. The loss of theory of mind was evaluated in children by asking "belief questions" to a puppet play. The autistic child would typically answer according to his own rather than to the misinformed puppet's belief. One aspect of this is the failure to attribute intentionality to other people ("intentionality" here in

the sense of having intentions and powers to act purposefully; be aware of a different sense of the word used elsewhere in this book). So, autists are supposed to be "hypo-intentional" as opposed to patients with schizophrenia who are "hyper-intentional" (Ciaramidaro et al. 2015), i.e., who tend to over-attribute intentions to agents and physical events, as evident in, e.g., self-reference. It seems, however, that there is also a certain impairment of theory of mind in at least some schizophrenia cases as well as in other psychiatric disorders such as frontal lobe damage (Brüne 2005).

In an attempt to separate the autism spectrum (AS) from schizophrenia (SZ), Nylander (2014) has listed a number of similarities and differences between the two. She claims that AS, unlike SZ, is present from birth or early childhood, whereas childhood SZ with onset at age 5–13 is very rare (Table 1, p. 265). This is true for (psychotic) schizophrenia but *not* for schizophrenia *spectrum* disorders. The great majority of patients within this spectrum have had some kind of nonpsychotic, premorbid or permanent, trait-like condition since early childhood resembling schizotypy, and many of these have always had common sense problems and social withdrawal. Therefore, Nylander's criterion is of little use. Some further features of both spectra overlap: e.g., the language abnormality pointed out by Kanner may resemble formal thought disorder of the schizophrenia spectrum, and the desire for sameness may look like the neophobia frequently present in schizophrenia.

Some clinical aspects may be helpful in making the diagnosis. The presence of other Bleulerian fundamental disorders apart from autism (like formal thought disorder), self-disorder, near-psychotic phenomena, and, among these, severe social anxiety is indicative of the schizophrenia spectrum. Within this spectrum, patients indeed display social withdrawal due to social anxiety, but they do not lose interest in other people: they want sincerely to have friends but have difficulty in interacting with others. A "squeeze machine" was invented by Grandin (1992), having autistic disorder herself, with the aim of delivering deep touch pressure to reduce anxiety, apparently as a substitution of human hugging, a solution probably unlikely in schizophrenia spectrum patients. Stereotyped speech and gestures have been pointed out as characteristic of autism (Lord et al. 2000).

8.10 Psychotic Phenomena in the General Population

Psychotic experiences (delusions and hallucinations) are reported to be prevalent in the general population at an average rate of 5 % (van Os et al. 2009) apparently supportive of the idea that psychosis is on a continuum with normality. The relatively high incidence rate (3 %) is interpreted as an indication that in most cases the psychotic experiences are transitory and disappear over time.

However, the research in this field is flawed by some theoretical and methodological problems. Psychotic-like experiences (PLEs) denote symptoms resembling those in psychosis apparently found in non-patient populations. There is a great variation in the definitions and use of assessment tools across the studies (Lee et al. 2016). One of the most widely used instruments for measuring PLEs is the

Community Assessment of Psychic Experiences (Stefanis et al. 2002), derived from, first of all, Peters Delusions Inventory (Peters et al. 2004). The phenomena described in these instruments appear heterogeneous and ill-defined. Some of them verge on Schneiderian first-rank symptoms (CAPE question #25: Do you ever feel as if the thoughts in your head are being taken away from you?), while others are quite nonspecific (#21: Do you ever feel that you are lacking in energy?).

Many studies rely on self-rating questionnaires and structured instruments administered by lay interviewers, methods of dubious validity. In a comparison of hallucinatory phenomena reported by schizophrenia patients and healthy students, Stanghellini et al. (2012) found qualitative differences. Presented with the same self-report questionnaire, the two groups described completely different phenomena, and thus the students did not report true hallucinatory phenomena (see also Sect. 6.6). The presence of psychotic-like phenomena using self-rating scales has been taken as tantamount to attenuated prodromal symptoms (cf. the DSM-5 attenuated psychosis syndrome), but Schultze-Lutter et al. (2014b) have demonstrated that the two types of phenomena are not related.

On the other hand, the broad schizophrenia spectrum includes individuals not fulfilling the diagnostic criteria of any spectrum disorder of the diagnostic systems (among these criteria the general clinical relevance criterion of DSM) and never detected by the psychiatric services. The prevalence of such "subschizotypal" cases may be relatively high, as reflected in the prevalence of schizotypal disorder being as high as 5 % in some studies (Torgersen et al. 2001). Some of these cases are expected to present sporadic near-psychotic or micropsychotic episodes. The detection of such cases of true (near) psychotic experiences does not in itself support the model of continuum with normality, but rather a categorical model. In a comparison of healthy people having auditory verbal hallucinations with controls, Sommer et al. (2010) find a lower global level of functioning and increased schizotypal and delusional tendency, suggesting that their voice hearing is part of a general vulnerability for schizophrenia, and an epidemiologic follow-up study by Sharifi et al. (2015) demonstrates that psychotic experiences at baseline are significantly associated with all-cause mortality at follow-up after adjustment for sociodemographic characteristics and psychiatric diagnoses, which seems to indicate that these experiences are part of mental disorders rather than normal phenomena.

8.11 Disclaiming Psychopathology in Psychosis

Psychiatric patients faking symptoms are a widespread myth. It is often claimed that this or that patient "pretends" to be ill in order not to be discharged (as if staying in hospital should be that attractive) and that these patients just imitate other patients' symptoms. Most patients, not having a specific motivation for malingering (legal examination, action for damage, and the like), do speak frankly about their illness if questioned in a supportive, interested way (see Chap. 4). The patients' use of technical terms excites the doctors' suspicion. But actually, patients really having such

symptoms are often relieved by learning the accurate terms for their experiences so hard to describe. Dissimulation is a greater problem for making the right diagnosis by far.

> A young man had difficulty in expressing the ineffably strange feelings he had been experiencing until he was taught the term, "delusional atmosphere". From then on he was using it frequently, but in an appropriate way: "Yesterday I had an episode of delusional atmosphere…."

Psychotic symptoms are also explained away as "dissociative." In dissociation there is a mental detachment from thoughts, emotions, memory, etc. Since the late nineteenth century, it has, so far, been used in a narrow sense for reactions in emotionally charged, stressful, conflictual states (strong affect) or in certain subcultural religious settings. In recent years, a much broader reading of the term has gained a footing in psychiatry. Everything characterized by some kind of splitting is considered dissociative, e.g., auditory hallucinations: the fact that the patient no longer recognizes them as originating from his own mind is interpreted as dissociation (cf. Moskowitz and Cortens 2008). This is a highly disturbing development, as it tends to broaden the concept of dissociation and even disclaim psychotic symptoms. Thus, dissociative hallucinations are no longer reckoned among psychotic phenomena. If a patient is declared "not schizophrenic" due to the absence of thought disorder and a relatively good emotional rapport (which is often the case in beginning schizophrenia), her voices, being heard throughout the day, are doomed "dissociative" and expressive of "personality disorder." Furthermore, any two-way interaction with voices, e.g., a patient shouting at her persecutors, is called "dissociative hallucinations" (e.g., SCAN 1999) even in the absence of a clearly dissociative state which was the original idea of the definition.

Hallucinations are sometimes dismissed as "pseudohallucinations." Historically, this term has been used with several different meanings: internal hallucinations, hallucinations with insight, hallucinations in medical illness, etc. (Berrios 1996, p. 49–59; van der Zwaard and Polak 2001). Most of these are psychotic phenomena and, therefore, consistent with psychosis. Caution should be exercised in regard to the appraisal of insight into psychotic phenomena. Due to the "double bookkeeping" (see Sect. 8.1), many patients with schizophrenia have some intellectual insight into the voices (describing them as "voices" or "hallucinations"), even though they are acting upon them as real (answering them, submitting to their commands).

8.12 The Expressivity of the Schizophrenia Spectrum

The expressivity of psychosis is dealt with at length in Chap. 5. In this section, we give a survey of the expressivity of schizophrenia spectrum conditions.

Bleuler's *fundamental symptoms* (Bleuler 1950) are signs observed in "every case and every period" of schizophrenia. Among these are autism, loosening of association (formal thought disorder), and disorder of affectivity.

Schizophrenic autism, the lack of automatic, pre-reflective grasp of the meaning of, or attunements with, the world (se Sects. 5.4 and 8.3), is expressed in various ways. Praecox-Gefühl, or praecox feeling (Rümke 2007; Parnas 2011), is the specific intuitive experience in the encounter with a patient with schizophrenia, coloring all, otherwise nonspecific, psychopathology. The praecox feeling, Rümke says, is what distinguishes real schizophrenia from pseudoschizophrenia. Loss of common sense is betrayed through crazy acts (see Sect. 8.4). Behavior or appearance that is odd, eccentric, or peculiar is a criterion of schizotypal personality disorder (DSM-5) and schizotypal disorder (ICD-10).

Patients aware of their common sense problem tend to analyze other people's behavior in order to mimic it and to appear inconspicuous. Such patients may give an impression of shyness and insecurity. But some patients harboring aversion against common sense and underlining their own uniqueness (*antagonomia* as an aspect of the disturbance of intersubjectivity: Stanghellini 2004a, p. 100; Stanghellini et al. 2014) will appear more eccentric and/or bizarre.

Formal thought disorder is observed disorders of speech and writing, supposed to reflect disordered thinking. Disordered speech is found in other mental disorders as well: in mania (flight of ideas and, in severe mania, incoherence; Carlson and Goodwin 1973) and in organic states (fragmentation of thinking in delirium and perseveration in dementia). These varieties are expressive of disorders of speed and continuity of thinking. What seems more specific of schizophrenic thinking is the disorder of conceptualization: vagueness, literal and concrete thinking, or the alternation between these levels.

Using the Thought Disorder Index, a Rorschach-based procedure, in first-admission patients, Nielsen (2002) finds evidence by factor analysis of two factors: 1 = mild (or "trait") thought disorder, such as vagueness, as in schizotypy, and 2 = severe (or "state") thought disorder, seen in psychotic states. The mild disorders prove characteristic of the schizophrenic spectrum. These levels of thought disorder are also reflected in the diagnostic criteria in the DSM-5 and ICD-10 of schizophrenia ("disorganized speech (e.g., frequent derailment or incoherence)") and schizotypy ("odd thinking and speech (e.g., vague, circumstantial, metaphorical, overelaborate, or stereotyped)"), respectively.

Sigmund and Mundt (1999) have analyzed the formal thought disorders, or the *structural deformations of thoughts*, to be composed of six different elements:

1. Alterations in the range of meaning of terms or *metonymy*, the idiosyncratic meaning of single terms
2. Paragrammatisms, the deformation of the grammatical construction of sentences by false application of grammatical rules
3. Neologisms, idiosyncratically condensed terms
4. Concretism as a loss of the metaphorical level
5. Paralogical associations, omissions, and condensations
6. Thought distortion (*Zerfahrenheit*)

Zerfahrenheit is usually translated as incoherence or loosening of associations (Sass 1992a).

Berner et al. (1993, p. 78–82) have proposed their Vienna Research Criteria for Schizophrenia monothetically as the presence of incoherence (optionally with affective flattening), a radical reading of the fundamental disorders.

In a broader sense, thought disorder is defined as "positive" and "negative" varieties of linguistic disorders (Andreasen and Grove 1986). In this sense, they are found in organic and affective illness as well as schizophrenia, the positive thought disorder being more prominent in affective illness and the negative disorders in schizophrenia. Incoherence is observed in schizophrenia as well as in the severest stages of mania; the differential diagnosis is made by observing the patient passing from and to less severe and more classical stages of mania (Carlson and Goodwin 1973, see Sect. 11.1.4).

The expressive dimension of *disorder of affectivity* refers both to disorder of emotional expression (see Chap. 5) and to behavioral (negative) symptoms. Sigmund and Mundt (1999) list another six elements of expressed affectivity in schizophrenia:

1. Parallel visual axes
2. Increased rarity of eye movements
3. Hypomimia with marked rigidness of the upper half of the face
4. Loss of intonation
5. Decrease of affects with respect to intensity, abundance, and frequency
6. Parathymia and/or paramimia

Negative symptoms, a concept introduced in psychiatry with the operational definitions of schizophrenia, as we have seen, are nonspecific behavioral signs derived from the specific autistic and affective features expounded above and often related to underlying "productive" processes such as perplexity (see Sect. 8.2). The overall clinical picture is informed by the characteristic transformation of mental life in schizophrenia, referred to, e.g., as atrophy and hypertrophy of different modes: thought at the expense of feelings, immobility at the expense of movement, space at the expense of time, etc. (cf. Cutting 1985 p. 34, referring to Minkowski). The passivity and loss of enterprise render the patient dependent on external structure and impulse. Conrad (1958) refers to a "broken clock spring syndrome":

> The patient is no longer capable of building up any tension of needs at all, and is "standing still", wherever he is placed; it is like a clock with a broken spring. But as soon as his missing initiative is replaced from outside and he is set going doing something he can carry out any task for a short while, but he will soon be standing still once again. He is like a clock ticking along for a moment when shaken. (Conrad p. 127, our translation)

Catatonia is treated in depth in Chap. 5, and the severe manifestations are discussed in Sect. 8.2. Mild catatonic trait-like signs, named *structural deformations of movement* by Sigmund and Mundt (1999), are probably much more specific for the schizophrenia spectrum.

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Varieties of Depressive-Like Mental States

9

Abstract

The term, depression, covers a broad range of states of distress and low spirits from mild situational reactions at the one end to severe psychosis at the other end. In this chapter, three major classes of depression are drawn up: (1) *nuclear* (*or core*) *depression*, depression in the true sense exemplified by melancholia and (closely related) bipolar depression; (2) *paradepression*, depression as reactions to stressful life events and, therefore, closely related to personality and adjustment disorders; and (3) *pseudo-depression*, depressive-like states in physical diseases and negative symptoms in schizophrenia. Nuclear depression is characterized by a specific global mood, differing from the preoccupation with the stressful events of paradepression. Also, nuclear depression is distinguished by psychomotor inhibition as an expression of desynchronization, a fundamental disorder of this depression. A differential diagnosis of particular importance is schizophrenia. Affective states, well known in all phases of that illness, can be divided into demoralization, pseudo-depressive negative symptoms, and genuine depression (e.g., post-psychotic). Depression being used synonymously with distress in everyday clinic results in an exorbitant expansion of the term, but the specific depressive mood, like any mood, is not just an inner feeling but a specific atmospheric way of relating to the world of decisive importance for the differential diagnosis.

In this chapter, we examine the many meanings of the term depression. The concept of depression dates back to the early nineteenth century as a partial insanity defined as a disorder of emotions whose features reflect loss, inhibition, reduction, and decline (Berrios 1996, p. 299). Later, it was to form part of Kraepelin's broad affective spectrum, the manic-depressive illness. By the introduction of operationalism in psychiatry, the concept underwent a further expansion into an all-embracing class

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of mental states representing an admixture of unhappiness, anxiety, phobia, and character disorder (Shorter 2007) and with indistinct or arbitrary boundaries to states of normal psychology such as bereavement (Parnas 2012; Maj 2008; Horowitz and Wakefield 2007; Zisook et al. 2007). And consequently, the prevalence rate of this *major depression* concept is high (Hasin et al. 2005; Maj 2008). Furthermore, the distinction between the core depressive syndrome, melancholia, and the reactive types of depression is blurred, a fact lamented from many quarters (Shorter 2007; Coryell 2007; Fink and Taylor 2007). Shorter speaks of a "classic historical blunder" of lumping them together in the form of "major depression."

A further difficulty in delimiting the depression concept is the fact that reactive types of depression may transform into melancholia, psychotic depression, and even bipolar disorder (Akiskal et al. 1997); at the emergence of the first manic or hypomanic episode, the diagnosis must necessarily change from unipolar depression to bipolar illness. Therefore, the boundary between these two diagnostic classes, core depression and reactive depression, will always remain blurry. Below, we will take a closer look at these two classes (Sects. 9.2.1 and 9.2.2) as well as mental states mimicking depression, so-called pseudo-depression (Sect. 9.2.3).

9.1 The Diagnostic Criteria of Depression

For a major depressive episode, DSM-5 requires that "at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure" (p. 160). So, mood, here defined as "a pervasive and sustained emotion that colors the perception of the world" (DSM-5's Glossary of Technical Terms, p. 824), is optional and can be substituted by loss of interest or pleasure. Little is said about the quality of the depressive mood, except that it is "indicated by either subjective report (e.g., feels sad, empty, hopeless) or observation made by others (e.g., appears tearful)" (p. 160), which is not at all a definition of mood, but of feelings and behavior. DSM-5 does, however, provide a description of a specific melancholic mood, though not quite sufficient, as we will see below.

Correspondingly, ICD-10 requires, as core symptoms of depression, two of the following symptoms for mild to moderate depression: (1) depressed mood, (2) loss of interest or pleasure in activities, and (3) decreased energy or increased fatigability (p. 82–83). Here, there are no further defining attributes to depressive mood. The SCAN glossary (1999), serving as a manual for ICD-10, gives a similar laconic description of mood: "depressed mood may be expressed in a number of ways—sadness, misery, low spirits, inability to enjoy anything, gloom, dejection, feeling blue" (p. 67).

Schneider points out that in cyclothymia (bipolar disorder), there seem to be no symptoms of first-rank importance (as his first-rank symptoms of schizophrenia) except for the vital quality of mood (Schneider 1959, p. 135). As implied by the broad definitions of DSM and ICD, depressed mood is taken as a synonym of sadness or other similar attributes of inner distress. Healy (1993) refers to a study in which (mostly endogenously, i.e., core) depressive patients were invited to describe

their actual mood. Their descriptions fell in several categories: the commonest description was the experience of lethargy and inability to do things. The next most common was a sense of detachment from the environment (the inability to interact with others and even perceptual changes of the environment); then a physical feeling of "viral illness," aches, and pains; and cenesthesia-like sensation of a tight bands around the head or of inflation of the head. The patients were then asked to choose adjectives from a list describing their state, excluding the usual words for describing depression (e.g., sad). They came up with words like dispirited, sluggish, empty, and washed out, suggesting a state different from sadness.

However, mood is not only an inner mental state (Parnas 2012) but an atmospheric experience of the world. "[M]oods constitute a sense of being part of a world that is pre-subjective and pre-objective. All 'states of mind' and all perceptions and cognitions of 'external' things presuppose this background sense of belonging to a world." (Ratcliffe 2013). Mood is not directed toward any object, although some depressive patients may express delusional pseudo-explanations for their present state: they have gone bankrupt, are going to be divorced, etc. Depressed mood implies at least four further features: lack of vital drive, anhedonia, helplessness, and moral pain (Stanghellini and Rosfort 2013, p. 270). The core depressive (melancholic) patient may feel lifeless or dead and expect the world to be doomed and his/her children to have no future, as opposed to the patient in mourning who is indeed miserable because of the loss she has suffered, but who recognizes her own personal qualities and expects the rest of the world to go on unconcerned. The depressive mood with its diurnal variation is impervious to environmental influences (loss of reactivity, Gillespie 1929), as opposed to affective reactivity and lability of personality disorders. Sedative drug effects hardly lighten depression either (Schneider 1959, p. 139). DSM-5 offers simple and insufficient definitions of moods and affects (p. 824): "In contrast to *affect*, which refers to more fluctuating changes in emotional "weather," mood refers to a pervasive and sustained emotional "climate."" In fact, there are obvious qualitative differences: a mood is a background "sense of being part of a world" unlike an affect, which is situational and directed to a specific object (see the comparison in Table 9.1).

Table 9.1 A comparison of mood and affect

Mood	Affect
A background sense of being part of a world	A situational emotion in focus of attention
Non-intentional	Intentional: directed to an object
No semantic content	A situational theme
Often long-lasting	Situational, transient
Prerequisite for affects	On the background of a mood
Examples of moods providing basis for affects:	
Dysphoria →	Anger at…
Fearfulness →	Fear of…

The loss of interest or pleasure is named *anhedonia* (or hypohedonia). In melancholia, anhedonia is state-like, reflecting the depressive mood, and often part of the loss of all feelings (Johnson 1935; Jaspers 1997, p. 111), also referred to as *anesthesia dolorosa* (von Krafft-Ebing 1905), in which the patient is conscious of his emotional loss and is painfully affected by it (as opposed to apathy, which is a total loss of feelings accompanied by indifference). This inability to feel is expressed movingly by a melancholic patient:

> I still continue to suffer constantly; I have not a moment of comfort and no human sensations. Surrounded by all that can render life happy and agreeable, still to me the faculty of enjoyment and of feeling is wanting—both have become physical impossibilities. In everything, even in the most tender caresses of my children, I find only bitterness. I cover them with kisses, but there is something between their lips and mine; and this horrid something is between me and all the enjoyments of life. My existence is incomplete. The functions and acts of ordinary life, it is true, still remain to me, but in every one of them there is something wanting—to wit, the feeling which is proper to them and the pleasure which follows them. . . . . Music has lost all charm for me, I used to love it dearly. My daughter plays very well, but for me it is mere noise. That lively interest which a year ago made me hear a delicious concert in the smallest air their fingers played—that thrill, that general vibration which made me shed such tender tears—all that exists no more. (Quote from Brachet, in Johnson 1935)

Anhedonia is found in several psychiatric conditions in addition to depression: in schizotypy and schizophrenia (Meehl 1962; Pelizza and Ferrari 2012), in organic and in drug-related states. Its presence does not necessarily imply a depressive mood. Patients with schizophrenia can often tell the two conditions apart, e.g., stating, "I am not depressed, I just cannot feel any pleasure." In the schizophrenia spectrum, anhedonia is a trait-like disorder of self-awareness (Juckel et al. 2003). Meehl (1962) considers anhedonia, the "marked, widespread, and refractory defect in pleasure capacity," a "quasi-pathognomonic sign" of schizophrenia. It can be divided into social anhedonia related to diminished presence, the feeling of being present in the world and affected by it, and physical anhedonia, diminished ability to experience pleasure in relation to the immediate surrounding perceptual or intellectual stimulation (Parnas et al. 2005).

The accessory diagnostic criteria of depression in DSM-5 and ICD-10 are mostly nonspecific signs or symptoms (weight change, change in appetite, sleep and activity, diminished concentration, and in ICD-10: loss of confidence and self-esteem). Thoughts of death or suicide are often supposed to be expressive of depression, but they may, e.g., in schizophrenia be motivated by solitude with inability to participate in human interactions and feelings of inferiority, reflective of a more basic self-alienation and incapacity for immersion in the shared world (Skodlar et al. 2008). Only two of the accessory criteria of depression have a specific melancholic character: psychomotor agitation or retardation and guilt or worthlessness. In clinical practice, these features are nevertheless frequently misinterpreted.

Psychomotor retardation proper refers to retardation of all motor and mental acts: the patient moves slowly, answers questions with a latency, speaks slowly, shows few facial expressions, etc. (The expressivity of retardation is treated in

Sects. 5.1 and Sect. 9.4). In phenomenological psychiatry, it is seen closely related to a change in the temporal organization in melancholia (see below). In schizophrenia, there are phases distinguished by deviations of motor activity. Gruhle (1932, p. 203) speaks of *hyper*- and *hypo*-phases of spontaneity, the latter seen in stupor. *Benommenheit* (Bleuler 1950, p. 221–223; see Sects. 5.1 and 7.5.1), found in certain schizophrenic states, is a kind of motor retardation accompanied by perplexity but in the absence of depressed mood. Hypomimia, and other signs of reduced spontaneous motor activity, is often alleged to be retardation, but is found even in non-affective states like schizophrenia and dementia.

Guilt, with the predicates, "excessive" or "inappropriate", is part of the diagnostic criteria for depression in DSM-5 and ICD-10, and its negation, lack of guilt, for certain personality disorders, but the concept itself escapes definition in these diagnostic manuals. Feelings of guilt represent a variegated array of phenomena spanning from normal psychology to delusions. There are three different meanings of the concept of guilt (Stoltz-Ingenlath and Frick 2006): (1) the juridical, a guilt of action or inaction in the sense of making a mistake; (2) the ontological or existential guilt, a kind of debt similar to "owing something to somebody" or in not fulfilling one's own potentials in life; and (3) tragic guilt in the sense of being the cause of an evil which was neither consciously nor deliberately intended. All three categories may be found in normal psychology as well as in depressive guilt. There is always an interpersonal dimension to guilt, which occurs in a context of shared values and of real or imaginary accusatory others (Brooke 1985). Pathological guilt is "inappropriate": it is typically related to trifling faults in the past possessing exceptional subjective weight ("petites fautes," Tellenbach 1980, p. 180ff). Ratcliffe (2010) considers depressive guilt to involve a focus on past deeds whose effects are unchangeable, estrangement from others, in whose eyes one has done wrong, and anticipation of being harmed or punished. Sometimes the patient does not feel guilty about anything particular, but about everything, as a guilty rumination. Guilt in melancholia is "primary" (Tellenbach 1980, p. 177), an already premelancholic guilt of remaining in default to oneself. Guilt phenomena occur in other diagnostic areas than depression. The schizophrenic patient may express an ontological essence of guilt, e.g., feeling that his breathing is responsible for the famine in the Third World, dissimilar to the depressive guilt embedded in a personal statement without any recourse to such a general concept of guilt (Bovet and Parnas 1993). Straus (2012) expounds the obsessive-compulsive patient's feelings of guilt more like "a sense of horror about his being evil than about any particular evil deed. He is crushed by his universal feeling of guilt before he has ever begun to act" (p. 232).

Self-reproach is not defined in DSM-5 either. We meet, in clinical practice, any kind of self-criticism characterized as self-reproach, supposed to indicate depression. Pathological self-reproach is a self-punishment for having or not having done something, bound up with the experience of moral responsibility, reciprocally related to psychological responsibility (Shapiro 2006). Moral responsibility is uncompromising, ignorant of reasons or psychology, whereas psychological responsibility is related to agency. The melancholic self-reproach (or even self-accusation), related to guilt, is mostly relational, blaming oneself for hurting others. Depressive

self-reproach also differs from *morbid regrets* found in the schizophrenia spectrum as a reflection of diminished sense of basic self (Minkowski 2002, p. 226ff; Parnas et al. 2005). This latter may be related to the second meaning of guilt, but not necessarily as a relational phenomenon: a woman with schizophrenia complained in a long letter titled, "All my self-reproaches": "I can't do anything, I am too old-fashioned, I sing wrong…". Self-reproach should also be distinguished from regret in personality disorder, e.g., facing the consequences of impulsive behavior, and in paradepression (see below). Here, there will often be a touch of rationalization and self-pity. True depressive self-reproach is consistent, i.e., not attended by self-pity or blaming others. Obsessions (or pseudo-obsessions) with depressive themes of harming others or going beyond the bounds are frequent in severe depressions (se Sect. 10.4).

The Hamilton depression scale was devised for use only in patients already diagnosed as suffering from depression (Hamilton 1960). The scale is said to measure the *degree* of depression but is not designed to make the diagnosis. In effect, the scale covers more or less the same items as the diagnostic criteria of major depressive episode (DSM-5), which serves to show that the diagnosis can hardly be made exclusively by these criteria either. The major difference between Hamilton and DSM-5 is the depressive mood only appearing as a DSM-criterion. In any case, the diagnosis of depression cannot be made validly from nonspecific criteria without a prototypical recognition of depression.

Anxiety and agony, prominent features of depression, are absent from the diagnostic criteria and therefore lead to comorbid anxiety diagnoses in DSM-5 (not so in ICD-10 due to the (implicit) diagnostic principle of hierarchy taking effect in case of simultaneousness). The reason for the omission of these features from operational criteria is the intention to avoid criterial redundancy. Thus, anxiety has been relegated to the anxiety diagnoses.

9.2 The Different Meanings of Depression

The contemporary usage of the term, depression, covers a whole array of clinical states whose common denominator is some kind of distress, and statements like "I feel depressed" may refer to an infinite range of distressing psychopathological phenomena (Parnas 2012). Neither DSM nor ICD distinguish between different qualities of (major) depression, and although they do mention various depressive categories, such as organic depression, post-psychotic or post-schizophrenic depressions, they do not elaborate their qualitative differences. Even melancholia, seen by many researchers as a specific nosological unit, is relegated to a specifier—the melancholic features specifier in DSM-5 and the somatic syndrome in ICD-10.

Maj considers different approaches to the question, "When does depression become a mental disorder?" (2012). The first approach concerns the exclusion of sadness proportional to a real loss. The difficulty here is, among other things, the fact that most depressive patients report stressful life events previous to the onset of depression and the fact that depression itself may cause such events (e.g., loss of

job). The second approach concerns the qualitative difference between true depression (at least the melancholic type) and sadness, which has been lost due to oversimplification of psychopathology. The third approach pertains to the boundary between normality and depression. A pragmatic approach to this is the application of diagnostic thresholds (of duration, severity, etc.). However, Maj demonstrates that the thresholds of DSM-IV major depression are arbitrary and lacking in empirical support.

Schneider (1959, p. 116) distinguishes between (at least) four different modes of depression with differing moods: (1) a reactive (motivated) mood, aroused by something external; (2) an irritable or gloomy mood, reactive on the background (Hintergrund) of psychic tension or physical discomfort, such as migraine, menstruation, and toxic effects; (3) a depression of the psychic ground (Untergrunddepression), the commonly experienced spontaneous onset of depressive feelings; and (4) the vital cyclothymic [bipolar] depression, filling "the total canvas." The notion of psychic ground (Untergrund) means the non-experienced basis of all mental processes. Weitbrecht enlarges on Schneider's "Untergrunddepression" (Weitbrecht 1973, pp. 432–434): it is a mild causeless, i.e., spontaneously arising, depressive-like state in normal or disordered personality, often of short duration, comparable with experience of "getting out of bed to the wrong side" or the state of premenstrual dysphoric disorder. In contrast to what is seen in bipolar depression, the patient will try to counteract this state with the aid of amusement or substance abuse. To these depressive modes by Schneider, Weitbrecht adds the endo-reactive dysthymia (p. 434ff), supposed to be depression neither belonging to the abnormal reactions nor the endogenous (bipolar) depressions. Compared with the reactive states, these are more severe and bodily related, e.g., with a hypochondriac tint. The phases of illness do not have the causeless endogenous character of bipolar disorder, and mania is not seen. The existence of such a subgroup of depression is, however, controversial.

In the following, the depressive states will be divided into three groups: *nuclear depression* (melancholic, bipolar, and "endogenous" depression characterized by a depressive mood and vegetative somatic symptoms—corresponding to Schneider's fourth mode), *paradepression* (a number of reactive and situational states with bad temper and gloom, similar to Schneider's first mode), and *pseudo-depression* (depressive-like states in somatic or psychotic disorder).

9.2.1 Nuclear Depression

Until the early nineteenth century, melancholia was a "rag-bag of insanity states" with few delusions (Berrios 1995, p. 385). The modern concept took shape in the last decades of the century, and melancholia became related to the manic-depressive insanity. The twentieth century melancholia prototype is a clinical state comprising psychomotor retardation or agitation, late insomnia and early morning worsening (related to the disruption of circadian rhythms), and ideas of guilt.

Phenomenological psychiatry has identified disturbances of the time structure to be the generative disorder of melancholia. Time has several different meanings.

Physical time is the one measured by clocks and watches, but of special interest for the theory of melancholia are two kinds of personal time: experienced time and lived time. Experienced time is time as an object of experience, e.g., time experienced as dragging when you're bored. Lived (or existential) time is time a living dynamism, as a stream of consciousness. Straus (1928) argues that disturbance of experienced time characterizes melancholia. Indeed, depressive patients do have abnormal time experience, either as a loss of sense of time or a slowing down of the flow of time (Stanghellini et al. 2016). Von Gebsattel (1939) points out that the disturbance of lived time, too, is essential for melancholia, lived time as inner dynamism, or "vital becoming" [Werden], closely related to the concept of *élan vital* (Bergson 1911), a vital impetus or force driving evolution. In melancholia, this inner stream of vitality is "drying out" so to speak. There is an "inhibition of the personally formed impulse of becoming" (von Gebsattel, ibid.). This process results in a sense of the future being blocked.

Tellenbach (1980, p. 58ff.) puts forward a pathogenetic model of melancholia: inspired by the work of Shimoda and others, he identifies a premorbid personality type predisposing to melancholia, the *typus melancholicus*, characterized by a fixation of orderliness, conscientiousness, an above-average level of aspiration for one's own performances in regard to quality and quantity (cf. Stanghellini et al. 2006). Threats to this orderliness and conscientiousness predispose to feelings of guilt. The patient encloses herself in self-inflicted projects and rules, which she can no longer transcend nor be equal to, and because of her lacking flexibility she is unable to find a way of escape, a phenomenon called *includence*. *Remanence* refers to a temporal lagging behind, slowing down, or stagnation, expressive of the change in time experience, and this is the background of melancholic retardation, a process which Fuchs (2001) refers to as "desynchronization." The patient is increasingly tortured by trifling faults viewing them as irretrievable. Unable to keep up with her duties the patient feels powerless. The indebtedness following this gives rise to feelings of guilt, even in the premelancholic phase. The melancholic guilt is "primary," expressed in statements like "What have I done to suffer so much?," and themes are triggered by fortuitous incidents and eventually by recollection of past events. Tellenbach speaks of "the melancholic grandiose delusion of guilt" (ibid., p. 181) starting from this extravagance in the valuation of particulars. Melancholia may also be precipitated by changes in living conditions like house moving (house moving or relocation depression) implying a painful separation from one's home and familiar streets and neighbors (Zutt 1963).

Personal time is also disturbed in schizophrenia but differently (Parnas et al. 2005). Here are episodes in which the flow of time is experienced as either slowed down, speeded up, or fragmented. The disturbance in existential time is characterized by a persistent presence without future projects and stereotyped reliving of the past. The world is experienced as static and spatial.

The emergence of *despair* marks the transition from the premelancholic phase to melancholia (Tellenbach, ibid., p. 165ff.). Despair as a psychopathological concept is almost forgotten by clinicians and replaced by hopelessness. But as opposed to hopelessness, the final, negative result of seeking a way out, despair is an active

process on the basis of a growing deviation between desire and reality, target, and actual status (Bürgy 2008). The temporal sequence of duties is lost in an indecisive "movement backward and forward" (Tellenbach). This is the motive of depressive rumination. Quoting Garrett, Ratcliffe (2013) distinguishes three levels of despair: despair in relation to specific projects, personal despair encompassing all one's projects, and "philosophical" despair, involving a sense of life being irrevocably bereft of meaning. The two latter levels seem to have relevance for depression. Actually, Ratcliffe states that despair is a loss of the ground of hope.

As a result of the retardation, the future is experienced as blocked, and the patient cannot keep up with the present. The lived body (Leib) is changed into an objective, corporeal body (Körper) by "corporealization" (Fuchs 2003). The body, conveying the contact to the world, is felt lifeless, petrified, or dead ("chrematic," Kraus 2008). The psychotic form of this melancholic depersonalization is part of the Cotard's syndrome (Cotard 1974). When the patient claims to be dead, it is no mere metaphor but the articulation of the experienced feeling of torpor (Ratcliffe 2008). This corporealization contrasts with the bodily deanimation in schizophrenia (Stanghellini 2004; see also Sect. 8.4). Cotard's syndrome comprises not only such nihilistic delusions but also (paradoxically) delusions of immortality, of damnation or possession, suicidal thoughts and behavior, and insensitivity to pain (Cotard 1974; Young 2012). The nihilism of Cotard's syndrome may imply the nonexistence, annihilation, or rotting of body parts such as limbs or bowels. The melancholic petrification or constriction of the lived body implies a loss of emotional resonance and a detachment from others by an insurmountable abyss (Fuchs 2014). The patient is unable to feel and is tortured by this loss of feelings (see above) for her relatives. Kraus (2008) views the corporealization and loss of feelings as instances of depersonalization prevalent in melancholia. Guilt, a central aspect of melancholia, can be seen as the result of the process in which the patient loses his prereflective connectedness with others. Thereby, guilt becomes an object rather than an intersubjective relation (ibid.).

A "depressive autism" has been described as well (Kranz 1962). This term denotes a retreat from the outside world, being thrown back to one's own self, or a failing transcendence into the world. The schizophrenic autism is a loss of common sense (see Sect. 8.3), not necessarily implying a retraction from the world. Schizophrenic patients' withdrawal, sometimes named "secondary autism," is often related to social anxiety (Sect. 8.4), which is usually not present in depressive withdrawal.

In the DSM-5, melancholia is defined as "A mental state characterized by very severe depression" (Glossary of Technical Terms, p. 824). However, melancholia is absent from the diagnostic categories and has only left its mark as a specifier for depressive disorders, "with melancholic features" (p. 151), which comprises universal anhedonia, lack of reactivity, a distinctive quality of mood, diurnal variation (worse in the morning), early morning awakening, psychomotor agitation or retardation, anorexia or weight loss, and excessive guilt. The mood is defined as "A distinct quality of depressed mood characterized by profound despondency, despair, and/or moroseness or by so-called empty mood" (p. 151 and 185). Similarly, in the ICD-10 melancholia is named a "somatic syndrome" specifying depression. It is

added that, "Terms such as biological, vital, melancholic, or endogenomorphic are used for this syndrome in other classification." But it fails to describe the specific quality of depressed mood and does not include the excessive or inappropriate guilt either. ." In the "melancholic features" of DSM-5, despair and hopelessness are coordinate concepts. Despair, as we saw, is definitely a far more salient and active process in the dynamics of melancholia than hopelessness.

Bipolar depression seems related to melancholia. A number of empirical studies have shown psychopathological differences between bipolar I depression and unipolar depression (Goodwin and Jamison 2007, p. 15–18), and among these, psychomotor retardation, hypersomnia, late insomnia, and psychotic features are more frequent in the bipolars. A review by Cuellar et al. (2005) finds only four symptoms consistently appearing to differentiate unipolar and bipolar depression: unipolar depression is characterized by more anxiety, activity, and somatization and by less anhedonia compared with bipolar depression. Schneider (1959, p. 141) points out three delusional themes, which are recognized as prominent features of cyclothymic (i.e., bipolar) depression: delusions of sin, hypochondriacal delusions, and delusions of impoverishment. In his view, they are not symptoms of the depression but "represent already existing human anxieties, unmasked by the depression." The problem in separating unipolar from bipolar depression is the relative nonspecificity of (unipolar) depression and the fact that unipolars are converted into bipolars by the first manic or hypomanic episode. The following probabilistic guidelines for their separation have been suggested by Mitchell et al. (2008): features more common in bipolar I depression are atypical depressive features such as hypersomnia, hyperphagia, and leaden paralysis; psychomotor retardation, psychotic features, pathological guilt, and lability of mood; and earlier age of onset, prior episodes of depression, shorter depressive episodes, and family history of bipolar disorder. Features more common in unipolar depression are initial insomnia, reduced sleep, appetite disturbance, weight loss, normal or increased activity levels, somatic complaints, later age of onset, prolonged episodes, and no family history of bipolar disorder.

The quality of core depressive psychopathology, specifically informed by the depressive mood, is lost as they are converted into standardized diagnostic criteria of depression of DSM-5 and ICD10 and depressive items of instruments like PSE. In a comparison of depressive symptoms and their schizophrenic counterparts (cf. Sect. 8.4), the depressive self-reference characterized by critical, contemptuous attention; the psychic depersonalization with a content of dreariness, emptiness, and desolation; and the somatic depersonalization having a chrematic quality (see above) are all essentially distinct from the similar schizophrenic phenomena. Table 9.2 illustrates a number of such qualitative differences.

9.2.2 Paradepression

Paradepressions (Charbonneau 2010) are depressions emerging in conflictual, traumatic, or stressful life events and they are, therefore, closely related to stress and adjustment disorders. In the Scandinavian tradition the severe cases would be seen as psychogenic or reactive (i.e. as a reaction to stressful events) depressions

Table 9.2 A comparison of psychopathological features in melancholia and schizophrenia

	Melancholia	Schizophrenia
Anhedonia	State phenomenon	Trait phenomenon, related to disturbed primary presence
Reactivity	No reactivity (e.g., imperviousness to encouragement)	Sensitivity but loss of resonance (i.e., anhedonia): the "psychesthetic proportion"
Distress	Despair	Perplexity, ambivalence
Ruminations	Ruminations related to despair	Obsessional causeless primary ruminations and ruminations related to perplexity
Obsessions	"Altruistic" or sacrilegious pseudo-obsessions	Pseudo-obsessions with aggressive or sexual content
Guilt and self-blame	Feelings of guilt and self-blame (relational, personal)	General feelings of guilt; *morbid regrets*
Loss of contact	"Depressive autism": loss of contact with the world	Autism: loss of common sense; "*Secondary autism*": withdrawal
Changes in lived and experienced time	Loss of dynamism	Loss of future direction, stagnation
	Loss of synchronicity, an experience of slowing down and of the future blocked	A change in the experience of time flow (speed, continuity)
Somatic depersonalization	Confinement to a body experienced as dead	Separation from a body experienced as strange or fragmentary
Derealization	The world is alienated, empty, ghostlike, or nonexisting	The world is "made," strange, or unreal
Self-reference	With an undertone of reproach or contempt	"Primary," athematic
Voices	With an affective content: reproaching, contemptuous; experienced in the internal space, fleeting	With an neutral or threatening content; often experienced in the external space, episodic or protracted
Delusions	Ontic character. Affective contents: nihilistic, self-reproaching	Autistic-solipsistic, ontological character. All kinds of thematic contents
Intensity of 'productive' symptoms	Following the depressive mood	Continuous or related to stressors

constituting the majority of cases of psychogenic or reactive psychoses (Strömgren 1974; see also Sect. 11.2). Reactive depressive psychosis made its way into ICD-8 (ICD-8 Glossary 1974 p. 35). In preoperational American psychiatry, they were known as neurotic or situational depressions (Akiskal 1979; DSM-II p. 40). They arise in immediate relation to the traumatic events, they deal thematically with the traumatic contents, and the solution of the conflictual tension may have a therapeutic effect. The mood is different from that of melancholia, more like a gloomy, bitter, dysphoric state of mind. There is no characteristic change in temporal

organization, and so, there is no psychomotor retardation (but probably fewer facial expressions and "sad looks") nor pathological self-reproach and feelings of guilt (but rather disappointment, resentment, and regret). These depressions are "reactive" in a different sense of the word, too, as the patients may be cheered up in contrast to core depression (Gillespie 1929).

Depressive episodes in borderline patients differ considerably from melancholia. Triggered by experiences of abandonment, the borderline depression is imbued with a tense irritated mood, proneness to externalize anger, resentment toward the environment, high reactivity, and low levels of guilt, and the body is felt distant from the patient and out of her voluntary control (Stanghellini and Rosfort 2013, p. 271). The chronic dysthymia of borderline personality disorder (BPD, and other severe personality disorders) is frequently mistaken for genuine depression (Kernberg and Yeomans 2013). Patients may state that they feel chronically hopeless and helpless, but asked in which way they feel so, they express more accusation and rage against others than depressive self-devaluation and appear more angry than depressed. Other characteristics of genuine depression mentioned by the authors, not found in BPD, are the specific predepressive personality structure, the presence of neurovegetative symptoms, and minor, "symbolic" environmental conditions as environmental triggers. Finally, they point out some differences in the patterns of self-destructive behavior. In personality disorder, they find acute or chronic parasuicidal behavior, such as repeated cutting or burning—particularly under conditions of intense emotional agitation, temper tantrums, or acute frustrations. The suicidal behavior of the core depressive patient is much more serious and requires acute inpatient treatment.

DSM-IV includes a depressive personality disorder (pp. 732–733) in Appendix B, Criteria Sets and Axes Provided for Further Study. The criteria are low-intensity depressive traits: a mood dominated by dejection and gloominess, low self-esteem and self-blaming, feelings of guilt, pessimism, and brooding, but also a critical and judgmental attitude to others. Probably because of the overlap with dysthymia, the diagnosis is left out of DSM-5.

The demarcation between depression and bereavement has been blurred after the controversial omission of the exclusion criterion E, "The symptoms are not better accounted for by Bereavement" of DSM-IV (p. 327) from DSM-5 (Sato 2015). DSM-5 adduces in a footnote (p. 161) some clinical indications of grief as opposed to major depression: the predominant affect is feelings of emptiness and loss, the dysphoria occurs in the so-called pangs of grief associated with thoughts of the deceased, it may be accompanied by positive emotions and humor, there is a preoccupation with thoughts and memories of the deceased rather than the self-critical or pessimistic ruminations, etc. What is important here is the absence of depressed mood. The relation between depression and adverse events is very complicated (Maj 2008); if bereavement should be excluded, why shouldn't depressions related to other adverse events? And in many respects these 'situational' depressions are clinically difficult to distinguish from the non-situational types.

Table 9.3 Depressive-like phases of schizophrenia

The initial prodromal depression
Depressive phases (of hebephrenia)
Depressive symptoms in active schizophrenic episodes
Post-schizophrenic (or post-psychotic) depression
Negative symptoms resembling depression
Demoralization syndrome

9.2.3 Pseudo-depression

Depressive-like states are widespread among physical diseases, sometimes named *pseudo-depressions*. These depressions can be divided into symptomatic depressions induced by systematic diseases (endocrine diseases, viral infection, systemic lupus erythematosus, HIV infection, pancreatic cancer, vitamin B12 deficiency, or folic acid deficiency) and secondary depression, i.e., depression secondary to central nervous system disorders and cerebral vascular insufficiency (Miyoshi 2001). These depressions are often accompanied by cognitive disorders, and a history of affective disorder is lacking. See also Sect. 7.4.3.

Pseudo-depression may also appear in nonorganic states like schizophrenia dominated by negative symptoms (see the next section).

9.2.4 Depression in Schizophrenia

Depression is seen in all phases of schizophrenia (see Table 9.3): an initial prodromal depression (Conrad 1958) is recognized in as much as 80 % of the cases (Häfner et al. 2005a). Depressive phases of the illness have been described especially in the hebephrenic (or disorganized) subtype (Bleuler speaks of "melancholia" as well as "mania" in schizophrenia, 1950), patients often fulfill the criteria of depression during active psychotic phases, and post-schizophrenic (ICD-10) or post-psychotic depression (DSM-IV—omitted from DSM-5) occur at the point of remission or in residual states.

The nature of these pictures is heterogeneous. Bartels and Drake (1988) identify three subtypes of depression in schizophrenia: (1) depressive symptoms secondary to organic factors (abuse, medication, and medical illness), (2) symptoms occurring in acute psychosis, and (3) symptoms without relation to psychosis (prodromal, negative symptoms, demoralization). Similarly, Skodlar (2009) exposes three different meanings of depression of in schizophrenia: (1) depression as a reaction to schizophrenia, (2) as an integral part of it, and (3) as an independent disorder. The first meaning is depression as a demoralization syndrome, the reaction to the severe illness. Most patients complain of solitude, the inability to interact with other people, feeling simultaneously inferior to and different from them (overlapping with the loss of basic sense of self; see Sect. 8.3), and the inability to achieve their life goals. The second meaning refers to depression as an integral, constituent part of schizophrenia. On the expressive level, this corresponds to negative symptoms,

defined in the DSM-5 as "diminished emotional expression or avolition," such as apathy and indifference. As compared with depression, they are more trait-like and lack a corresponding depressive mood. On the subjective level, these features are self-disorders (Sass 2000). The third meaning represents depression as an independent state. Although post-psychotic depression, as an example of such an independent depression, may display many classical depressive features, e.g., feelings of guilt and early morning awakening, there is a theoretical problem here because of the, in many respects, antithetical nature of the two diseases (Skodlar 2009). These subtypes correspond roughly to our three major categories of depression presented in this chapter. Schizoaffective psychosis is treated in Sect. 11.3.

9.2.5 Subclinical, Atypical, and Transcultural Depression

The existence of subthreshold or subsyndromal states previously called "neurotic," "characterological," or "existential" depressions has been supported by clinical and polysomnographic findings (Akiskal et al. 1997). These states are characterized, e.g., by cyclically recurring neurovegetative manifestations and anxiety symptoms not fulfilling criteria for affective disorders. The "characterological" or "existential" depressions are distinguished by lifelong gloom and pervasive hypohedonia (with some similarity to that of schizotypy, an important differential diagnosis) or low-grade chronic intermittent depression, termed dysthymia (ibid.). Short REM-latency in these cases is very similar to that found in depression. Borderline personality disorder, too, is regarded as a subsyndromal affective state by Akiskal and other researchers, with "comorbidity" to dysthymia and even bipolar disorder. This view is not generally accepted. Another state mentioned by Akiskal as subsyndromal is residual depression occurring as inadequate recovery from depression. In this case, the course of illness will indicate the diagnosis. In masked (larvate) depression, patients have no depressive complaints but neurovegetative manifestations and a relatively short REM-latency. Still another atypical syndrome is the so-called "male" depression characterized by irritability, fatigue, and risky behavior (van Praag 2001). The problem with atypical depression of this kind is the question whether these are actually depressions as a *clinical* diagnosis.

"*With atypical features*," a specifier of DSM-5 for depression comprises the following features: (1) significant weight gain or increase in appetite, (2) hypersomnia, (3) leaden paralysis (i.e., heavy, leaden feelings in arms or legs), and (4) a long-standing pattern of interpersonal rejection sensitivity. Some of these (appetite and sleep disorder) are the reverse of the melancholic features. Though "atypical" in this sense, they are actually reported frequently in bipolar depression. There is an overlap here with seasonal affective disorder.

The clinical profile of depression varies across cultures (Jablensky et al. 1981). Guilt is prominent in European and North American patients, less so in Africa, India, and the Far East; somatization is prominent in the majority of non-Western countries (Juhasz et al. 2012). In a comparison of Pakistani and Austrian depressive patients, delusions of guilt are confined to Austrian patients, whereas ethical

feelings of guilt, related to the extent of retardation, are found in both groups (Stompe et al. 2001). Among Indian patients, somatic symptoms, hypochondriasis, anxiety, and agitation prevail, but guilt, obsessions, and paranoid symptoms are less frequent as compared with British patients (Gada 1982). However, across Indian cultures, there are considerable differences, too. Here is an example of somatic complaints taking the place of psychological complaints:

> A 60-year-old Chinese man has suffered from a constellation of symptoms over two years after retirement and subsequent financial problems: weakening in all extremities, tremor of hands, unsteadiness of gait, heart palpitations, easily fatigued, profound weight loss, and insomnia. He explains later that the financial problems "caused my depression on the heart and brain." (Kleinman 1977)

9.2.6 Psychotic Depression

Moderate to severe depressions are essentially psychotic, at least in the implicit sense of the term (see Sect. 8.1). "Psychotic depression" is usually meant depression with explicit symptoms of psychosis. Severe core depression may be accompanied by delusions and hallucinations. The delusions tend to focus on guilt and sinfulness, poverty, hypochondriacal and somatic concerns, and nihilistic delusions of being dead, but also even persecutory themes (Goodwin and Jamison 2007, p. 71; Winokur et al. 1969, p. 88). The depressive delusions are transient and fluctuating with the mood, as compared with the more stable delusions of delusional disorder and paranoid schizophrenia. The depressive delusions have an *ontic* character, i.e., are worldly, personal, tangible, as opposed the *ontological* character of schizophrenic delusions, which have a universal character. Accusing voices and voices of the dead calling the patient are typical examples of depressive auditory hallucinations (Winokur, ibid.). Like the delusions, they are fleeting, appearing in the most severe stages of depression. Ey (2012, p. 714) refers to depressive voices as a "call of death"; suicidal impulses are sometimes experienced as "imperative voices." Such depressive hallucinations are usually internal, apparently originating from the inner dialogue as a "voice of conscience." In some cases, the psychotic features are more prominent. Cases, diagnosed as fantastic melancholia by Kraepelin (1921, p. 89ff), are distinguished by abundant delusions and hallucinations: delusions of having committed mortal sins or crimes and hypochondriacal and nihilistic delusions. The examples of hallucinations mentioned are seeing evil spirits, hearing God speaking in words of thunder, hearing tortured relatives screaming, etc.

DSM-5 and ICD-10 allow depressive disorders the specification of psychotic features, i.e., delusions and hallucinations (DSM-5 p. 152 and 186, ICD-10 p. 84). *Mood-congruent* psychotic features are defined as having contents consistent with the typical depressive themes of personal inadequacy, guilt, disease, death, nihilism, or deserved punishment; *mood-incongruent* psychotic features are defined as not having such content, i.e., being affectively neutral, without special emotional significance. Kendler (1991) finds evidence that mood-incongruent psychotic illness is a distinct subtype of affective illness. The separation of these two types of psychotic

features seems to originate in Jaspers' distinction between primary and secondary delusions, the latter derived from and consistent with the prevailing affect, e.g., the depressive or manic mood (Spitzer 1992). According to Jaspers, primary delusions, specific for schizophrenia, are not derived from such an affect (see also Sect. 8.2 and Table 8.2). Of course, to speak of a depression with mood-congruent features, there must be a depressive mood; sometimes we come upon patients given that diagnosis hearing reproaching voices but in a "neutral" mood (see also the discussion in Sect. 6.5). One should also bear in mind that other things being equal, mood-incongruent features point to a non-affective diagnosis (Winokur et al. 1985), and in case of long duration or poor inter-episodic recovery, schizophrenia is a probable diagnosis. The question of first-rank symptoms as mood-incongruent features is also treated in Sect. 11.1.1. Schizophrenic patients may manifest psychotic features with a certain affective tinge, e.g., caused by the diminished sense of basic self. The *morbid regrets* (see above) may resemble self-reproach; the voices and self-reference may have critical contents. On the other hand, persecutory delusions, often associated with schizophrenia, are seen in psychotic depression, but here emanating from the patient's belief that he deserves persecution and punishment (Akiskal and Puzantian 1979).

9.3 The Course of Depression

Depression is an episodic disease. Most patients recover within a year. Most patients with major affective illness have more than one episode, but relapse is not so frequent in unipolar depression and a much higher relapse rate is seen only after the third episode (Goodwin and Jamison 2007, p. 126). After an episode of severe depression, subsyndromal levels of depression are common and persistent (Kennedy et al. 2004).

Recurrent depression is converted into bipolar disorder with the first manic or hypomanic episode (around 1 % of the patients a year, Akiskal et al. 1995), a fact complicating research in this field. Ghaemi et al. (2002) argue that recurrent depression may be related to bipolar disorder, and they draw up a list of anamnestic clues to possible bipolarity (see Sect. 11.1.5). Just like in bipolar disorder, the time to recurrence of new episodes in recurring depression is decreasing with the number of affective episodes (Kessing et al. 1998; see Sect. 11.1.6). Depression with an onset after age 40 is characterized by shorter duration of illness and fewer atypical features in both sexes and fewer recurrences in females (Benazzi 2000).

Depression is basically viewed as an episodic mental state. *Chronic depression*, therefore, presents a particular problem, whether it is an exceptionally long-lasting state or expressive of a trait-like structural change. Akiskal (1983) divides dysthymia, low-grade chronic depression, into these categories: late-onset primary depression with residual chronicity, variable-onset chronic secondary dysphoria as part of a neurotic picture or as a reaction to longstanding medical illness, and early-onset characterological depressions including character-spectrum disorders and subaffective dysthymic disorders. Clinically, dysthymia waxes and wanes; there seem to be

two clinical variations of dysthymia, one predominately anxious and an anergic one without anxiety (Niculescu and Akiskal 2001). Anxious dysthymia, more common in women, is characterized by insecurity and low self-esteem, restlessness, but with lack of efficient, directed activity. Anergic dysthymia, more common in men, is characterized by sluggish reactivity, low drive, low energy, anhedonia, and psychomotor inertia. It has similarities to chronic fatigue syndrome. In DSM-5, dysthymia is called persistent depressive disorder (p. 168).

Initial episodes of affective illness may mimic disorganized or catatonic schizophrenia (as pseudoschizophrenia) followed by typical affective episodes (Corbett 1978).

Many cases of supposed depression lasting years have different psychopathological structures. In the absence of psychotic features, they may represent schizotypy dominated by anhedonia, symptom-poor schizophrenia with prominent negative symptoms (incl. simple schizophrenia), or dementia. Long-lasting depression with psychotic feature (whether mood-congruent or incongruent) may turn out to be schizophrenia. The diagnosis follows, in case of schizophrenia, from the demonstration of the fundamental autistic features and self-disorders.

9.4 The Expressivity of Depression

The expressivity of nuclear depression is dealt with at length in the Chap. 5. The pivotal phenomenon is psychomotor disturbances (retardation and agitation). *Psychomotor retardation* can be defined as a slowing down of mental and motor activities. Sobin and Sackeim (1997) review the clinical findings of motor disturbances in depression: gross motor activity is decreased in bipolar depression; smiling, eyebrow movement, and eye contact are decreased in depression; the retarded patients may show paucity of speech, increased speech pause time, slowed responses, monotonic phrases, poor articulation, and less variability in mean vocal pitch; retarded depressed patients are slower with regard to both decision time and motor response time (making up reaction time). Parker and his research group (Parker and Brotchie 1992; Parker et al. 1996) regard retardation a core phenomenon in melancholia, and the most discriminating feature of melancholia, whereas agitation is harder to define, and thus less specific. Their CORE measure (Parker and Hadzi-Pavlovic 1996) is a scale of 18 behavioral signs, measuring psychomotor retardation and agitation and defining severe depression of melancholic type. Accelerometry is a method of direct measurement of motor activity (Mathie et al. 2004), whereby allowing a quantitative measure of retardation. Depressive stupor is extreme motor inhibition; generally, the motor tonus here is slack as opposed to tense catatonic stupor in schizophrenia (see Sects. 5.3.1 and 8.2) although the patient in some cases may resist attempts at movement (Goodwin and Jamison 2007, p. 68, quoting Henderson and Gillispie). Agitated depression is often considered a mixed state of bipolar disorder (see Sect. 11.1.3).

Schizophrenic catatonia may be confused with psychomotor retardation. Certain catatonic signs are found in depression, but they are often more prominent in

schizophrenia than in depression. The catatonic patient has a blank facial expression, but his eyes may dart around the room, and the depressive patient has a depressive, even tearful face (Corbett 1978).

Signs of depression in addition to those seen as expressions of retardation or agitation have been identified by classical descriptive psychiatry (see Sect. 5.6). Vegetative signs are changes in appetite, weight, sleep (terminal insomnia: early morning waking), and diurnal variation (worse in the morning, or morning agony, with evening remission).

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Varieties of Anxiety

10

Abstract

Anxiety is widespread across all mental disorders, both as moods and as situational affects. The specific psychopathological quality and context of symptoms serve as diagnostic guidance.

Anxiety as mood is also part of depressive agony and of certain mood states in schizophrenia, e.g., delusional mood and ontological anxiety. Panic attacks frequently accompany a wide range of mental disorders but may also be confused with attack-like phenomena of a different character: night terrors, dysesthetic crises, partial epileptic fits, etc.

Social anxiety in the broad sense of the word, i.e., distress in social situations, accompanies all kinds of psychopathology in the interpersonal field, most of all within the schizophrenia spectrum. The exploration of social anxiety is a gateway to psychopathology.

Besides in classic OCD, obsessive-compulsive-like phenomena abound in schizophrenia spectrum disorders and mood disorders, but here they often fail to fulfill the narrow diagnostic criteria: obtrusive, unreasonable thoughts, which are resisted and counteracted by the aid of compulsions, causally related to the obsessions. Pseudo-obsessions are near-psychotic symptoms; pseudo-compulsions are like catatonic magical rituals. Compulsions should be distinguished from stereotypies, tics, morbid geometrism, etc. This chapter also touches on hypochondriasis and dysmorphophobia, usually grouped with anxiety disorders.

Anxiety is free-floating and unattached, painful feelings (cf. Jaspers 1997, p. 113ff.). Anxiety may be a phenomenon of normal psychology, and in pathological forms, it accompanies a wealth of mental and physical disorders, including most psychotic states. The presence of anxiety in itself has no diagnostic

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significance, and only the specific quality and psychopathological context of the anxiety phenomena can give us a hint as to the diagnostic area in question. In DSM, anxiety results in ample comorbidity, not allowed in ICD due to its hierarchical rules. And thus, anxiety states do not constitute a single coherent spectrum of mental disorders. In this chapter, we shall address the manifold variations of anxious moods, situational anxiety, social anxiety, panic, and phobic anxiety. In addition, we also discuss obsessive-compulsive and related phenomena,[1] traditionally grouped with anxiety.

10.1 Anxiety as Mood

Mood is a sense of being part of a world that is pre-subjective and pre-objective (Ratcliffe 2013a, see Sect. 9.1). Mood as opposed to affect is not directed toward any object or situation and does not convey any explicit theme but is more like a background for all experiencing. Trait anxiety, anxiety related to the personality structure (e.g., anxiety-related dysphoria), is anxiety as a basic mood. But anxiety mood may also take the shape of a state-like change in mood.

Agony is an aspect of severe mental illness, seen as tantamount to depression by many clinicians, and in the absence of further prominent, productive psychopathology, this diagnosis is liable to be made (cf. Parnas 2012). *Moral pain* (Stanghellini and Rosfort 2013), a form of agony often described as anxiety, is a salient feature of severe depressive (melancholic) mood. This form is closely related to despair (see Sect. 9.2.1) and to depressive rumination. Tellenbach (1980) illustrates the desperate alternation backward and forward with a case of a young woman saying:

> When I want to work, there is something in me that *works against* it. Previously everything went *hand in hand*, I had figured out one thing after another. Now I twist and turn all night and brood about what I am going to cook the next day and what kinds of things I have to do. (p. 168)

Another aspect of depressive rumination, related to the altered temporal structure (see Sect. 9.2.1), is described by von Gebsattel (2012b). His patient, a 20-year-old melancholic woman, is constantly preoccupied with time flying past:

> I am terribly anxious… of one minute passing by and then another and death coming closer and closer. (p. 216)

Various states of incipient schizophrenia are characterized by specific moods, often with elements of anxiety: delusional mood (though other emotions like elation may predominate here), passivity mood, ontological anxiety, and fleeting or free-floating anxiety (pan-anxiety: Hoch and Polatin 1949; Meehl 1964).

[1] An "obsessive-compulsive and related disorders" grouping is under consideration for ICD-11, Stein et al. (2016).

Delusional mood, or delusional atmosphere (see Sect. 8.4), is an all-pervasive change in the physiognomy of the world (Conrad 1958), an all-encompassing change in the shape of experience and thought (Ratcliffe 2013b, p. 232)—and not a perceptual change—often accompanied by anxiety. There is a disintegration of intentional perception, a loss of familiar meaning of the perceived situations; the constitution of the everyday world is fundamentally disturbed (Fuchs 2005). Schneider describes it as an experience of oddness—rarely of exaltation (1959, p. 109). Conrad (1958) gives this example of delusional mood from a German soldier's onset of illness:

> All last winter he had been having a feeling of some lurking danger but he had no idea what it was. In January when he was back home on leave he was improving but then his condition went even worse. In April he was sent on extraordinary leave. "When I got off the bus everything looked so strange, everything was so unreal." He thought that people in the bus were from the police, they looked so familiar. (Conrad, p. 43–44, our translation)

It is evident from the beginning thematization in this example that a paranoid psychosis is on its way (in Conrad's terminology, the patient is passing from the *trema* to the *apophanic* phase, the referential psychosis).

Passivity mood is a special case of delusional mood in which the patient has an unspecified feeling of being in a passive, dangerously exposed position, at the mercy of the world, as if something negative may happen imminently (Parnas et al. 2005). A Schneiderian schizophrenic psychosis with passivity phenomena may ensue.

Ontological anxiety, or ontological insecurity, is a pervasive sense of insecurity, weakness, inferiority, indecisiveness, low anxiety tolerance, persistent low-grade free-floating (objectless) anxiety, or a subtle, pervasive sense of something ominous impending (Parnas et al. 2005). The patient may feel exposed or unprotected. Thus, one patient describes the world as dark, intrusive, evil, heavy, and troublesome, and another patient complains of feeling vulnerable, insecure, and insufficient. The phenomenon was originally described by Laing (1960) as an insecure person's experience of engulfment, implosion, or petrification in the encounter with the world. Here is one of our clinical examples:

> A young woman has been suffering every night for the last six months from pronounced anxiety. She fears that "the world is going to disappear" and that she will not wake up in the morning. It is as if life could come to an end any time. She feels lonely and insufficient.

Pan-anxiety in pseudo-neurotic schizotypes is described by Hoch and Polatin (1949) in this way:

> Many of these patients show, in contrast to the usual neurotic, an all-pervading anxiety structure which does not leave any life approach of the person free from tension. Practically everything that the patient experiences influences this anxiety. It is a polymorphous anxiety in the sense that no matter how a person tries to express himself or to side-track an issue, to break through the conflict or to avoid it; anxiety is always manifested. All these attempts, to express, side-track, break through or avoid, are present, usually simultaneously.

Meehl (1964) emphasizes the patient's anxious reaction to "novelty" (sometimes referred to as *neophobia*) as a striking manifestation of the rigid avoidance pattern accompanied to pan-anxiety. Trivial changes as having to take a different bus route to work will make the patient over-react or panic.

10.2 Panic Attacks

DSM-5 defines a *panic attack* as an abrupt surge of intense fear or intense discomfort that reaches a peak within minutes and during which a number of physical and mental symptoms occur. The physical symptoms include palpitation, sweating, and dizziness, and the mental ones derealization, depersonalization, and fear of going crazy or dying. The diagnosis panic disorder requires recurring attacks and a month of worrying about more attacks and a behavior to avoid them. ICD-10 stresses that such attacks are not consistently associated with a specific situation or object, and often occur unpredictably (DSM: unexpected).

There have been various attempts at subdividing the panic attacks. Ley (1992), using psychological and physiological criteria, distinguishes between the *classic* (type I), the *anticipatory* (type II), and the *cognitive* panic attack (type III). The classic attack is marked by uncontrolled high-intensity sense of impending suffocation, palpitations, and catastrophic thoughts associated with death or impending doom, leading to terror and desire to flee. In the anticipatory attack, the focus of fearful concern is centered on what might happen rather than what is actually happening. Cognitive panic attacks are preceded by low-level anxiety. Worry and excessive concern with relatively minor or improbable negative events will increase the anxiety and lead to arousal and alarming anxiety. However, a review by Kircanski et al. (2009) indicates that panic disorder is a heterogeneous disorder and fails to find evidence warranting the utility of diagnostic subtyping. Still, the above types may be useful as aspects of panic attacks.

Panic attacks are frequent in mood disorders (Chen and Dilsaver 1995), in the schizophrenia spectrum, and in organic and drug-related states. Some paroxysmal psychopathological phenomena may be confused with panic attacks. *Night terrors* (sleep terrors, or *pavor nocturnus*) are attacks initiated in deep slow wave sleep and consisting in a feeling of impending doom and terror, screaming, and activities like rushing from the bed (Matthews and Oakey 1986). They seem to be related to epilepsy but also to other kinds of psychopathology: inhibition of aggression, anxiety, depression, obsessive-compulsive tendencies, and phobia (Kales et al. 1980).

Dysesthetic crises (Schultze-Lutter et al. 2007; Gross et al. 2008) are paroxysmal states seen in the schizophrenia spectrum, lasting seconds or minutes, involving cenesthesias, central-vegetative disturbances (like sweating, nausea, and palpitation), and an existential fear of dying, exemplified by a patient complaining that "I had attacks of a painful constriction of the body, like tightening a robe, that caused a dreadful fear of choking." Panic attacks do not involve cenesthesias, but may be accompanied by physiological symptoms of anxiety (sweating, tremble) and of hyperventilation (tingling, dizziness). *Partial epilepsy* may result in affective

symptoms, fear, and autonomic features resembling panic attacks (Thompson et al. 2000). The following features are put down as typical of partial seizures: short duration (1–2 min), observation of motor automatisms, age greater than 45 years, history of febrile convulsions, and lack of response to conventional treatment for panic attacks.

Anxiety raptus is an earlier name for sudden exacerbation in an anxiety state, similar to a panic attack. Depressive agony may sometimes undergo a sudden aggravation, the depressive, or melancholic, raptus (Erkwoh and Huber 2009; see also Sect. 5.5).

10.3 Social Anxiety (Social Phobia)

Social anxiety is a broad category of phenomena having in common different forms of anxiety, discomfort, or fatigue in social situations (see also Sect. 10.3). In schizotypy, Meehl (1990) prefers the term interpersonal aversiveness, not implying an introspectable anxiety signal, which is not always explicitly present. Thus, social anxiety as defined here is far broader than the DSM-5 diagnosis of social anxiety disorder and ICD-10 social phobia. Social anxiety may be found in different diagnostic spectra but first and foremost in the schizophrenia spectrum, mostly as near-psychotic phenomena (Jansson 2015). The early prodrome is characterized by profound changes in the interpersonal relatedness, even before the appearance of manifest negative symptoms (Raballo and Krueger 2011), leading to social anxiety and isolation. The anxiety may be related to many anomalous subjective experiences occurring in social situations: self-reference, paranoid ideation, fear of bodily contact, transitivism, perceptual overload, and loss of common sense. A closer analysis of the psychopathological characteristics of social anxiety will often serve as a gateway to the underlying disorder. We shall examine some of these variations of social anxiety (see Table 10.1).

Social anxiety disorder (DSM-5), or *social phobia* (ICD-10), refers to circumscribed psychologically defined reactions to being the focus of attention or being exposed to scrutiny by others (including *erythrophobia*, the fear of blushing). The situations exemplified in DSM-5 include social interaction, being observed, or performing in the presence of others. Defined in this way, the condition is closely related to self-insecurity or low self-esteem, and of course, there is frequent (tautological)

Table 10.1 Variations of social anxiety

Social anxiety disorder (social phobia)
Self-reference:
Primary
Secondary
Transitivistic anxiety
Paranoid fear
Fear of closeness and bodily contact
Social perplexity and loss of common sense
Sensory overload

"comorbidity" to avoidant personality disorder, the anxiety and avoidance being two sides of the same coin. Fuchs (2003) argues that social phobia is related to shame. *Body dysmorphic disorder* (see Sect. 10.5) as an overvalued fear of bodily ugliness, also related to shame, may lead the patient to retreat from social contacts (ibid.).

Self-reference is the experience of other people or external events referring to the patient, often leading to fear of showing oneself on the street, and thus to isolation. There are several variations of this anxiety. The social anxiety disorder (or social phobia) may be accompanied by a certain degree of nonpsychotic self-reference related to self-insecurity and by avoidance. There are several variations of near-psychotic (or psychotic) self-reference. The *primary* self-reference found in schizophrenia spectrum disorders is a feeling of being at the center of other people's attention without any overall theme, often related to a loss of the sense of basic self and a slight transitivistic feeling of being "seen through" (see below). In the schizophrenia spectrum, we also find *secondary* self-reference of paranoid and affective types, but the primary type is specific to this spectrum. In (nonpsychotic) paranoid personality and (psychotic) delusional disorder, the theme will be persecution or surveillance. In melancholia and bipolar, the theme is (deserved) blame and contempt. In mania self-reference related to grandiosity will not give rise to social anxiety, but in schizophrenia, it often does:

> A young man in his first episode of schizophrenic psychosis regrets in his diary: "I haven't got a life, how can I be so good, they are talking about the size of my penis and making qualified bids. I have heard people saying that it reaches the floor. I have observed with my sense of smell, that people are becoming wet between their legs, both when I am there and when I am not there. Most people masturbate towards me."

Transitivistic anxiety, usually appearing episodically, has other modes of expression as well. A feeling of being too "open" or to be "read like a book," often accompanying loss of basic self and self-reference (e.g., all eyes turned to the patient, as if everybody can see the weakness that she is radiating), may border thought broadcast and lead the patient to think politely, or have neutral "white thoughts," lest the other should perceive them. As this phenomenon is often related to eye contact, it may lead to various coping strategies, such as wearing sunglasses and avoiding eye contact. The patient may also experience a confusing feeling of mixing herself up with the interlocutor:

> She feels "totally galled and incredibly sensitive towards everything". Her boyfriend "is taking all her energy". It is hard because she "tends to be swallowed up", which makes her anxious and doesn't know what belongs to her or her boyfriend, e.g., feelings.

Paranoid fear in, e.g., schizotypy (paranoid ideation being a diagnostic criterion of ICD-10 schizotypal disorder) is yet another cause of social anxiety. There is a groundless experience of other people being undependable or hostile causing the patient to be on his guard. Some patients literally avoid turning their back on others and prefer to seat themselves in the corner or with their backs to the wall so they can "survey the room." Meehl (1964, p. 51) describes in some schizotypes a "gullible-suspicious paradox" as mixture of gullibility and suspiciousness; see Sects. 5.5 and 8.4.

Closeness and bodily contact are yet other sources of social anxiety in the schizophrenia spectrum. It may be a little difficult to make out what exactly is experienced as distressing. In some cases, the situation is "awkward" and the patient doesn't know how to react when hugged by somebody as a manifestation of loss of common sense. But in cases of pronounced anxiety and the statement of a concrete "safe distance" to others, e.g., 3 ft, it may be transitivism being at work. The physical contact is experienced as threatening for the patient (Parnas et al. 2005). Meehl includes overreaction to a handshake or a touch on the shoulder under the sign, closeness-panic, in his schizotypic checklist (1964, p. 28).

Loss of common sense and perplexity also result in certain trait-like types of social anxiety. This is especially true for a group of patients who are painfully aware of their failing social skills. Carrying on a structured conversation on technical topics or delivering a speech may feel safe, whereas unstructured chats are extremely embarrassing. "Small talk is off-limits for me," one woman said. Social conventions seem senseless and result in hyperreflectivity, self-monitoring, and brooding. Even informal time with friends may drain the patient's energy.

> I am completely confused about how we talk to each other as normal human beings about normal things–I find it so complicated. I have forgotten how to be in the world and how to act towards others.

The anxiety caused by social interaction may be the reason for many young people with initial schizophrenia to prefer animals to humans and to wish to become animal keepers.

Sensory overload, an aroused state of perceptual awareness also related to the schizophrenia spectrum (Gross et al. 2008), may occur when passing through crowds and therefore becomes a form of social anxiety. Walking down a pedestrian street or visiting a department store is extremely stressful and motivates the patient for avoidance behavior.

10.4 Obsessive-Compulsive Phenomena

Obsessive-compulsive phenomena are derived from French and German psychiatry stressing the obsession and compulsion respectively (Dalle Luche and Iazzetta 2008; von Gebsattel 2012a). The obsession was seen to preserve some kind of rationality absent in delusion ("*délire sans délire*"). A relationship between phobias and obsessions has generally been recognized, and the phobic basis of the obsessive phenomena has been named anankastic phobia (von Gebsattel 2012a).

Thoughts having an involuntary or repetitive character and behavior counteracting such thinking or having a ritual character are widespread in psychiatry across diagnostic categories; in the broad sense of the term, they are known as obsessive-compulsive *phenomena* (OC)—as opposed to more narrowly defined obsessive-compulsive *disorder* (OCD)—although psychopathologically they are, as we shall

see, widely different, and the qualitative difference is crucial to the differential diagnosis. Gross et al. (1988) list OC phenomena in seven different diagnostic categories; among these are bipolar disorder, schizophrenia, and organic states. The prevailing definition of obsession is more or less in accordance with Schneider's definition (as quoted by Bürgy 2007, p. 104): obsession is what is meant when somebody cannot repress contents of consciousness although he assesses them as being nonsensical or as dominating without reason. More precisely, it is a "doubting disease" (*folie de doute*): the feared event *can* possibly happen although this is very improbable. However, very low probabilities do not mean *impossible* (Dalle Luche and Iazzetta 2008). "Not just right experiences" (Coles et al. 2003) refer to OC phenomena related to, e.g., checking and order, in which the patient feels a need to perform compulsive-like acts until they are "just right," without a more explicit obsessional theme.

The thematic contents of the obsessions are manifold: contamination, aggressive, transgressive, or sexual impulses, loss of property, loss of order, and loss of safety (Taylor et al. 2008). Some symptom dimensions appear to be consistently replicated across studies, e.g., contamination/washing, symmetry/ordering, and hoarding (Mataix-Cols et al. 2005). The common denominator is a transgressive, catastrophic content.

Obsession proper, as found in obsessive-compulsive disorder, is usually defined as obtrusive thoughts (or other contents of consciousness), which are ego-dystonic, and deemed absurd and resisted by the patient by the aid of *compulsions*, which are causally related to the obsessions (compulsion proper). In DSM-5 obsession is defined by these two criteria:

1. Recurrent and persistent thoughts, urges, or images that are experienced, at some time during the disturbance, as intrusive and unwanted, and that in most individuals cause marked anxiety or distress.
2. The individual attempts to ignore or suppress such thoughts, urges, or images, or to neutralize them with some other thought or action (i.e., by performing a compulsion) (DSM-5, p. 237).

The ICD-10 has four research criteria of obsession and compulsion (p. 97–98):

Obsessions (thoughts, ideas, or images) and compulsions (acts) share the following features, all of which must be present:

1. They are acknowledged as originating in the mind of the patient and are not imposed by outside persons or influences.
2. They are repetitive and unpleasant, and at least one obsession or compulsion must be present that is acknowledged as excessive or unreasonable.
3. The subject tries to resist them (but if very long-standing, resistance to some obsessions or compulsions may be minimal). At least one obsession or compulsion must be present which is unsuccessfully resisted.
4. Carrying out the obsessive thought or compulsive act is not in itself pleasurable (this should be distinguished from the temporary relief of tension or anxiety).

Criterion 1 serves to differentiate the obsession from depersonalization and from passivity phenomena such as thought insertion. The patient recognizes immediately (not just in recollection) the thought as his own thinking but finds its contents absurd and its emergence as incomprehensible and therefore tries to resist it. Criterion 2 stresses the obsessive idea as acknowledged as excessive or unreasonable by the patient. In DSM-IV, the criteria included the word "inappropriate," meaning more or less the same as excessive or unreasonable, but this word has been replaced with "unwanted" in the DSM-5. The reason seems to be the widening of the concept of obsession to include pseudo-obsession and delusion, as reflected in the DSM-5 specifiers (see below).

The most upsetting obsessions are those which the patient evaluates as most significant and violating valued aspects of the self (Rowa et al. 2005), which is the case with "crime obsessions" or "altruistic obsessions" (see below), or in the following classical example of a sacrilegious obsession (Pontoppidan quoted by Kortsen 1916, p. 103, our translation):

> An elderly pious lady always had to think of a chamber pot whenever at communion the chalice was passed on to her, which was very painful for her.

The obsessive thought is not accompanied by pleasure (ICD-10 criterion 4) or by other emotions agreeing with the theme (e.g., anger, panic) and is rejected before it is allowed to unfold into vivid imagination. The sense of reality in obsessive states has been questioned. As pointed out by Shapiro (1965), the obsessed patient does not really believe the obsessive idea to be true; he just cannot rule it out. When touching a hand knob, he thinks that somebody having an infectious disease *might* have touched it before, and, therefore, he might run a risk of catching infection by touching it too, however, negligible the risk may seem to be.

There seem to be two different variants of obsession, termed in different ways. Lee and Kwon (2003) distinguish between autogenous and reactive obsessions, the former coming abruptly into consciousness without identifiable evoking stimuli, and the latter being evoked by identifiable external stimuli. Autogenous obsessions have a sexual, aggressive, or moral content and are not followed by compulsions, and reactive obsessions appear more realistic and logical with a content of accidents, contamination, disorder, and loss of things, with a lower degree of egodystonicity, and followed by compulsions.

Obsessions are the salient feature of obsessive-compulsive disorder but are found in other diagnostic areas as well, e.g., depression (however mostly as pseudo-obsessions—see below). Tellenbach (1980, p. 176) speaks of an "obsessive moment in the inclination to guilt feelings" in melancholia. This guilt theme is obvious in the empirical literature. In a review, Angst et al. (2005) report an association between OCD and bipolar disorder. Some obsessional themes are more frequently found in the comorbid than in the pure OCD group: doubts, aggressive/impulsive symptoms, sexual and religious thoughts, and some compulsions (repetitions, hoarding, confessing and asking questions, seeking reassurance). This is in keeping with Lauter's finding (1962) that

altruistic and sacrilegious obsessions are seen more frequently in depression. In the altruistic obsession, there is a fear of criminal and aggressive impulses and in the sacrilegious obsession a fear of blasphemous acts (as in the example with the pious lady above). Gittleson (1966) reports of an obsessional fear of killing others prevalent during depression. Perugi et al. (1997) report higher rates of sexual and religious obsessions and lower rate of checking rituals in bipolars. All these thematic contents seem in keeping with the depressive mood. The obsession also seems to follow the variation in mood: Lauter finds a great number of melancholic patients having obsessive-compulsive symptoms (anankastic depression) mostly confined to and closely integrated in the melancholic phase, and Gittleson finds that they show diurnal variation in intensity like the associated depressive symptoms. Strakowski et al. (1998), too, report the OCD and bipolar disorder to cycle together. Furthermore, Gittleson demonstrates the primary personality of the majority of cases is characterized by insecurity, orderliness, and conscientiousness, traits characterizing the *typus melancholicus* (Tellenbach 1980; see also Sect. 9.2.1).

Obsessive-like phenomena are widespread within the schizophrenia spectrum, too (Rosén Rasmussen and Parnas 2015). Symptom-poor cases with conspicuous obsessive-compulsive symptoms and often with a progressive course, a *forme fruste* of schizophrenia, have been diagnosed as *endogenous obsessive-compulsive disorder* (endogene Zwangskrankheit, Gross et al. 1988). The nature of the OC phenomena in the schizophrenia spectrum has been debated, but it appears that in most instances, obsessive-like episodes are to be seen as temporary delusional ideas (Bürgy 2007). However, in many cases, the patients are not totally convinced of the truth of the idea but rather puzzled or greatly in doubt and reacting with anxiety. These near-psychotic phenomena are characterized as *pseudo-obsessions*, which appear more egosyntonic compared with true obsessions, and thus are resisted to a lesser extent, frequently having a pictorial-imaginative character with a content that is aggressive, sexual, or otherwise bizarre (Parnas et al. 2005). In other cases, they rake take shape of obsessive rumination. Due to failing resistance, and contrary to obsession in the strict sense, the image is maintained for some time and has often a vivid quasi-perceptual or even internal hallucinatory character. The patient explores the image or sequence with fascination or fear, and the experience may be accompanied by emotions agreeing with the content. Thus, the notion of pseudo-obsession is spreading over near-psychotic as well as psychotic phenomena. Here are a few examples:

> A young woman informs us that what tortures her the most are recurring trains of thoughts with "barbarian" content, first and foremost watching herself in self-injurious acts. While driving a car she sees herself losing control or driving straight ahead when the road is turning, and in the kitchen cutting herself with a knife. She sees everything in detail in her mind's eye and she can almost sense the pain.
>
> When meeting a sinister-looking man in the train a young man "sees" himself beating this man up as in an adrenaline rush.

Pseudo-obsessions without imaginary character also occur:

A socially isolated woman is constantly tortured by the idea that she must remember everything that happens to her in order that she can one day report it all to her future husband. Therefore she is monitoring herself all day long.

Obsessional phenomena in depressive states are of egosyntonic pseudo-obsessive character, too, albeit of a different quality: e.g., the "altruistic" obsessions and blasphemic obsessions (above) are experienced as in keeping with self-blaming attitude and are, therefore, egosyntonic. The experiential differences between true obsessions and pseudo-obsessions prevalent in the schizophrenia spectrum are summed up in Table 10.2.

In DSM-5, the following specifiers to obsession allow rating the level of insight, thereby including pseudo-obsessions and delusion under the OCD diagnosis:

- *With good or fair insight*: The individual recognizes that the obsessive-compulsive disorder beliefs are definitely or probably not true or that they may or may not be true.
- *With poor insight*: The individual thinks obsessive-compulsive disorder beliefs are probably true.
- *With absent insight / delusional beliefs*: The individual is completely convinced that obsessive-compulsive disorder beliefs are true (DSM-5, p. 237).

This unfortunate widening of the OCD-category will undoubtedly contribute to the diagnostic confusion.

Table 10.2 Experiential differences between obsession and pseudo-obsession

Obsession	Pseudo-obsession
An idea, thought, or other contents of consciousness which is obtrusive	An idea, vivid imagination or sequence, which may be obtrusive
Resisted	Not actively resisted
Egodystonic	(Partly) egosyntonic
Considered absurd, both as to the content (e.g., hurting others) and the probability (e.g., having checked repeatingly)	Considered probable
The thematic content is without affective coloring	Often with aggressive, or sexual content
No affects accompanying the content	Accompanied by, e.g., aggressive or euphoric feelings
Not followed by anxiety	The content may be scaring or disturbing
Thoughts acknowledged as one's own	Thought ipseity may be lost (thoughts not experienced as originating from oneself)
May be accompanied by magical thinking	Magical experiences possible
Transparent, i.e., without spatial structure	May be experienced as spatialized
A rational, causal relation between obsession and compulsion	A magical relation between pseudo-obsession and catatonic ritual act

The question of insight in OCD is further complicated. As pointed out by Shapiro (1965), the patient cannot rule out completely the truth of the obsessional idea, and the OCD patient, without delusional belief, may exhibit greater verbal than behavioral recognition of the senselessness of the obsession (Marková et al. 2009). Alonso et al. (2008) have demonstrated that poor insight in OCD patients is associated with depressive symptoms and schizotypal traits, in agreement with the frequent presence of pseudo-obsessions in schizotypy. The question of insight in schizophrenia spectrum cases is further complicated by the phenomenon of double orientation, the coexistence of two realities (see Sect. 8.1).

The last DSM-5 specifier reflects an idea shared by many clinicians of a delusional type of OCD (e.g., O'Dwyer and Marks 2000). DSM-5 attempts to make a distinction between delusions in delusional disorder and delusional OCD beliefs which it accepts as OC phenomena (p. 241). Delusional "obsessions" are, however, nothing but delusions which belong to a different nosological category than obsessions, as they are core symptoms of psychosis. Obsessions and delusions were originally constructed in terms of the presence/absence of a putative "awareness of illness" (Marková et al. 2009). The acceptance of delusional OCD thus questions the boundaries of the diagnostic categories but also lacks theoretical basis and sufficient empirical evidence. What seems to interfere here is maybe the fact that within the schizophrenia spectrum, some delusions seem to be on a continuum with the near-psychotic pseudo-obsessions.

Compulsion is defined in the DSM-5 by the following two criteria (p. 237):

1. Repetitive behaviors (e.g., hand washing, ordering, checking) or mental acts (e.g., praying, counting, repeating words silently) that the individual feels driven to perform in response to an obsession or according to rules that must be applied rigidly.
2. The behaviors or mental acts are aimed at preventing or reducing anxiety or distress or preventing some dreaded event or situation; however, these behaviors or mental acts are not connected in a realistic way with what they are designed to neutralize or prevent or are clearly excessive.

ICD-10 (blue book) offers this definition: "Compulsive acts or rituals are stereotyped behaviours that are repeated again and again," which could actually also cover phenomena like stereotypies and catatonic acts.

Because of the inherent inability of anankastic phobia to bring things to a close, the compulsive acts are repetitive. Repetitive compulsions are explained by a compulsion for exactness. Every step of the morning routine is performed separately accompanied by a compulsion to check. Mistakes will undo the act, and therefore a repetition compulsion sets in (von Gebsattel 2012a).

The compulsion in the strict sense of the word is secondarily and causally, not magically, related to the obsession: the obsessional idea that one's hands are soiled leads necessarily to a washing compulsion. Furthermore, to speak of a compulsion, there must be an obsession. Neither of these preconditions is unambiguously fulfilled in the DSM-5 criteria. As pointed out by Bürgy (2007), neither DSM-IV nor

ICD-10 addresses clearly the relation between obsession and compulsion, and both systems allow the OCD diagnosis to be made even in the absence of an obsession, which is inconsistent with the classical definition of this diagnosis (e.g., the diagnosis: predominantly compulsive acts, ICD-10). Compulsive-like phenomena not fulfilling these demands are often considered pseudo-compulsive catatonic acts, e.g., a stereotypy—or a ritual as in this case:

> During his "dead years" he was staying in bed all day long spending most of the time making ritual movements, e.g., turning the handle of the cup in a certain direction to prevent his mother from dying.

Apparently true, repetitive compulsions related causally to the declared obsessive thought may disclose a psychotic motivation on closer inspection:

> A young woman had to shake the door handle three times when leaving the house to make sure that the door was locked, and she then had to return two more times to do the checking over. She explained that a voice was telling her each time that the door was left open.

Several psychopathological phenomena, especially within the schizophrenia spectrum, resemble obsessive-compulsive symptoms and are often referred to in these terms by the patients (Parnas et al. 2005; Gross et al. 2008). It is important to recognize them in order to make the differential diagnosis.

Morbid geometrism (Minkowski 2002, p. 138ff; Parnas et al. 2005), or morbid preoccupation with geometry, is a lifeless preoccupation with spatial arrangements in the world, symmetry, mathematical, or numerical aspects of the world, regarded as an aspect of the loss of common sense in the schizophrenia spectrum. One patient was striving for perfect bodily symmetry standing in front of the mirror while having hyperreflective (pseudo-obsessive) considerations as to the nature of the human body. In other cases, the governing theme may be totally missing: a young woman reports that when watching TV, she must place her legs on each side of the TV set in a right angle, because it "feels right." OCD patients, too, may justify their need for order with statements that it feels "just right" (Coles et al. 2003), obscuring the difference to certain cases of morbid geometrism, but otherwise, order and symmetry in OCD is related to the need of exactness, precision, and correctness as obsessional themes, and the compulsive rituals then has the purpose of checking for mistakes. In some OCD cases, compulsive acts of symmetry and order may be accompanied by magical component, e.g., "If my clothes are not arranged properly, mother will die" (Summerfeldt 2008).

In *thought interference,* irrelevant thoughts or images break into the main line of thoughts "out of thin air." Contrary to the obsession, thought interference conveys no meaning to the patient. In *captivation of attention* by details of the perceptual field, the patient is spell-bound by an insignificant detail and has a difficulty to move attention away from it.

Motor interference is motor derailment without the patient's intention, e.g., the legs walking by themselves, but as opposed to motor influence, there is no experience of external control. Related to motor interference is the catatonic phenomenon known as automatism in descriptive psychiatry (see Sect. 5.2).

Some of the passivity phenomena (and near-psychotic phenomena akin to these) may also be described by the patient as "obsessions," e.g., *thought insertion*, but here there is an experience of control by a force outside the patient, in contrast to the obsession.

Repetitive behaviors are frequently seen in autism spectrum disorders (constituting one of the criteria): stereotypies, obsessions—of less complicated type than in OCD— compulsive-like phenomena (mostly of ordering, hoarding, and touching), tics, echolalia, sameness behaviors (e.g., insisting on furniture remaining in same place), self-injury, etc. (Lewis and Bodfish 1998).

Some syndromes are often included in the obsessive-compulsive disorder. *Hoarding* (Greenberg et al. 1990; see also Sect. 5.1), or "pathological collecting," is behaviorally defined compulsory activity which, no wonder, covers a number of quite different clinical states: OCD, psychosis, organic disorders, etc. In OCD, the governing obsession is the idea of losing property.

> A young man is meticulously heaping up newspapers, magazines, envelopes and the like for obsessive fear of throwing away something important lying hidden between the pages, e.g., a letter.

In some schizotypal cases, hoarding behavior seems to be related to ambivalent indecision, e.g., confusion whether objects are useful or not. One patient bought lots of extra kitchen tools at flea markets thinking that he might need them in the future in case he once got a summer cottage. In psychosis, hoarding may either be a response to delusional ideas (e.g., of theft or poisoning) or be expressive of disorganization and negative symptoms resulting in piles of trash. Hoarding bizarre objects is also indicative of psychosis, e.g., jerry cans full of urine and feces accumulated over many months (Greenberg et al. 1990). A young woman collected things like leaves from the trees in the park in her handbag, claiming they were "important papers" and her husband's "medical certificate" (Wimmer 1936, p. 322). In dementia and other organic states, we meet a similar scenario caused by cognitive deterioration. Hoarding disorder is a separate diagnosis in DSM-5 (p. 247) but with the same specifiers as OCD and therefore also including psychotic disorders (in spite of the exclusion criterion of psychotic conditions better explaining the disorder).

DSM-5 enumerates three more, bodily defined, syndromes supposed to be related to obsessive-compulsive disorder: *body dysmorphic disorder* (p. 242), *trichotillomania* (*hair-pulling disorder*) (p. 251), and *excoriation* (*skin-picking*) *disorder* (p. 254). Once again DSM-5 allows rating along the OCD specifiers. Body dysmorphic disorder, or dysmorphophobia, is often seen as a special case of hypochondria (see below). These are conditions whose nosological status is open to question. The existence of such an obsessive-compulsive spectrum is doubtful, and it seems more like a heterogeneous group of disorders (Castle and Phillips 2006).

Organic obsessive-compulsive states are treated in Sect. 7.4.4.

10.5 Hypochondriasis and Dysmorphophobia

The prevalent definition of *hypochondriasis*, or hypochondria, corresponds to that of ICD-10 *hypochondriacal disorder* (p. 106), a persistent preoccupation with the possibility of having one or more serious and progressive physical disorders. Likewise, DSM-5 *illness anxiety disorder* (p. 315) entails a preoccupation with having or acquiring a serious, undiagnosed medical illness. However, DSM-5 claims that most patients with hypochondriasis are now classified as having somatic symptom disorder, characterized by persistent, distressing somatic symptoms leading to excessive health concern, more or less the same as somatization disorder in ICD-10. Illness anxiety disorder does not include delusional patients, thereby excluding hypochondriacal (or somatic) delusions, i.e., delusions of suffering from physical illness, as seen in, e.g., delusional disorder, melancholia, or schizophrenia.

Bjerg Hansen (1976) states that hypochondriasis embraces two diagnostic areas, *nosophobia*, the nonpsychotic fear of illness, and *delusional hypochondriasis*, the topic of his monograph. In nosophobia, the patient consults the doctor for physical examination to confirm or rule out the feared illness, and the negative result of the examination brings about some temporary relief but eventually the doubt will return. In *delusional hypochondriasis*, as in all delusions, there is a persistent conviction resistant to the doctor's reassurance. The thematic contents of the delusions cover a broad spectrum of physical diseases, but also, e.g., pregnancy (pseudocyesis) and parasitosis. The latter, known as Ekbom's syndrome, or delusional infestation, is characterized by delusion that the skin and body is infested by small, vivid (or less frequently inanimate) pathogens (Freudenmann and Lepping 2009), sometimes accompanied by formication, a tactile sensation of something crawling on the skin. The syndrome is found as a primary (functional) psychosis but may also be caused by, e.g., psychoactive drugs. Grotesque hypochondriacal complaints indicate delusion:

> One patient believes that some of his semen passes through a fistula into the abdominal cavity and from there into the bloodstream, poisoning the organism and affecting his brain. Therefore he feels fuddled. (Bjerg Hansen 1976, p. 25, our translation)

Cenesthetic complaints with concrete explanatory descriptions suggesting delusional hypochondriacal beliefs (bodily hallucinations, or bodily influence), e.g., experiencing beetles crawling deep inside the brain, indicate schizophrenia. In Cotard's syndrome of melancholia, there are nihilistic beliefs of the body being dead or decaying (see 9.2.1). In other cases with subtle hypochondriacal symptomatology, it is more difficult to establish the delusional nature, like the following case of "spectacle hypochondriasis" (a term originated from Bjerg Hansen 1976, p. 36) from our clinic:

> A woman in her mid-twenties has been preoccupied with her glasses for several months. She spends hours adjusting them, often in private. Her behavior has been interpreted by doctors as compulsions, and she has consequently been diagnosed with OCD. She has

changed her glasses several times and has tried contact lenses but all in vain. She has difficulty in making out what the problem is but she insists that *there is something wrong*, either with the glasses or her face. The diagnosis is changed into delusional disorder.

In dysmorphophobia or *body dysmorphic disorder* (BDD), akin to hypochondriasis, the patient is preoccupied with specific defects of his physical appearance (e.g., the nose being too big). Related to shame, the patient fears other people's gazes, a fear that may culminate in ideas of reference and motivate the patient to seek cosmetic surgery (Fuchs 2003). The good or fair insight specifier of DSM-5 seems to represent an overvalued idea as part of a nonpsychotic hypochondriac condition, the delusional specifier points to a hypochondriac paranoia (overlapping with DSM-5 delusional disorder, somatic type). The existence of an independent nosological entity centered on dysmorphophobia as the pivotal symptom is more than doubtful. Often dysmorphophobia must be regarded as a symptom-poor schizophrenia spectrum disorder, and it is actually mentioned in one of the criteria of ICD-10 schizotypal disorder: "Ruminations without inner resistance, often with dysmorphophobic, sexual or aggressive contents." The validity of delusional BDD as distinct from delusional disorder has been questioned (Fontenelle et al. 2006). At least in some cases, the delusions appear to be part of paranoid schizophrenia: a socially isolated and formally thought disordered young man, convinced that his (normally looking) eyes are far too small, tries to enlarge them with heavy eye lining and to hide them under the brim of his cap, making him look rather bizarre.

A different phenomenon, not to be mistaken for dysmorphophobia, is the paroxystic experience of *morphological body change* (Parnas et al. 2005), a subjective self-disorder of the schizophrenia spectrum. Here there is a sensation of the size or shape of the body or parts of it changing (e.g., arms feeling longer or swollen), sometimes accompanied by a perception of morphological change (e.g., the arm *looking* longer or swollen). Paroxysms of morphological change may also be part of the so-called Alice in Wonderland syndrome (Todd 1955), seen in migraine, epilepsy, infectious diseases, and so on. In addition to the experience of morphological body change, this syndrome covers a wide range of psychopathological phenomena: perceptual distortions (metamorphopsia, micropsia, telopsia: appearing changed in form, smaller, and more distant), depersonalization, derealization, the feeling of having a double giddiness, etc.

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Bipolar Disorder and Acute Psychosis

11

Abstract

This chapter covers acute and episodic psychoses. Bipolar disorder is characterized of recurring psychotic shifts. Only mania and mixed states of bipolar disorder will be treated here, as bipolar depression has already been discussed in Sect. 9.2.1.

What is essential to the diagnosis of mania is the manic mood. Psychosis characterized by psychomotor agitation and reckless behavior is likely to be diagnosed as mania, even in the absence of manic mood. The specific manic mood is not just an inner feeling of elation. It is a way of relating to the world, an uncritical extroversion in which the patient experiences everything within reach and easy. The manic world is dedifferentiated, and everybody is seen as a brother. The manic symptoms all bear the impression of the manic mood. The manic grandiosity is mundane as opposed to the solipsistic quality of the schizophrenic type. The manic agitation is informed by expansivity. Manic flight of ideas approaches incoherence in the severest stages of the illness.

Mixed features are common, e.g., as tearfulness in mania, but the definition of mixed states varies greatly across diagnostic systems. Bipolar disorder is an episodic illness, but there is a great extent of inter-episodic subsyndromal symptoms, often resulting in chronic functional impairment. Schizoaffective psychosis is an ill-defined group of psychoses with features from both spectra, characterized by low reliability and doubtful validity. There is more convincing evidence of a class of acute psychoses, formerly described under varying names, often precipitated by stress, independent of the affective and schizophrenic spectra.

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This chapter is devoted to episodic psychotic illnesses, those related to the bipolar spectrum, as well as the acute and stress-related psychoses. Psychosis characterized by conspicuous psychomotor agitation and uncritical, intrusive attitudes is likely to be diagnosed as "mania," regardless of the general clinical presentation. Expansive behavior is interpreted as tantamount to elevated mood. This is an area of frequent misdiagnosis, which calls for sophistication of the diagnostic process. Agitation as such is a nonspecific aspect of many different psychotic states: besides mania, also found in mixed states and agitated depression, hebephrenic (disorganized) and catatonic schizophrenia, acute psychoses, organic delirium, and toxic and withdrawal psychoses. Once again, the crucial part is the identification of the fundamental processes, the basic mood of the disorder, and the specific quality of the clinical picture and its component symptoms.

11.1 Bipolar Disorder: Mania, Hypomania, and Mixed States

The bipolar spectrum is characterized by well-defined episodes of depression and mania or hypomania, opposite clinical pictures, which gave rise to the nineteenth-century names, "folie circulaire" and "folie à double forme." Between the acute phases, the patient is relatively free of affective symptoms (euthymic). Observations like these led Kraepelin to advance his dichotomy of manic-depressive illness (bipolar disorder) and dementia praecox (schizophrenia). This has resulted in to another stereotypic generalization: phasic illness is diagnosed as bipolar disorder and chronic illness as schizophrenia. However, bipolar patients do have inter-episode affective symptoms and some schizophrenia cases have a cyclic course of illness.

In this section we will examine mania, the quintessence of acute agitated psychosis, mixed states bordering on mania, and agitated depression, probably a subtype of these mixed states. The inhibited depressive states of bipolar disorder are treated at length in Sect. 9.2.1.

11.1.1 Mania

Mania is one of the opposing poles of bipolar disorder. A manic episode is defined in DSM-5 as follows (criterion A, p. 124):

> A distinct period of abnormally and persistently elevated, expansive, or irritable mood and abnormally and persistently increased goal-directed activity or energy, lasting at least 1 week and present most of the day, nearly every day (or any duration if hospitalization is necessary).

Three additional symptoms are required (four if the mood is only irritable):

1. Inflated self-esteem or grandiosity
2. Decreased need for sleep (e.g., feels rested after only 3 h of sleep)

3. More talkative than usual or pressure to keep talking
4. Flight of ideas or subjective experience that thoughts are racing
5. Distractibility (i.e., attention too easily drawn to unimportant or irrelevant external stimuli), as reported or observed
6. Increase in goal-directed activity (either socially, at work or school, or sexually) or psychomotor agitation (i.e., purposeless non-goal-directed activity)
7. Excessive involvement in activities that have a high potential for painful consequences (e.g., engaging in unrestrained buying sprees, sexual indiscretions, or foolish business investments)

The formulation in ICD-10 is similar, except that it has nine additional symptoms, the three of which approximately covering #7 of DSM:

- Loss of normal social inhibitions resulting in behavior which is inappropriate to the circumstances
- Marked sexual energy or sexual indiscretions
- Behavior which is foolhardy or reckless and whose risks the subject does not recognize, e.g., spending sprees, foolish enterprises, reckless driving

Schneider points out that we may mistake states of irritability, haste, and excitement for a manic condition but that it is the mood itself that is diagnostic (1959, p. 117). DSM-5's glossary of technical terms offers scanty definitions of the variations of mood (p. 824–825). Mood is defined as "A pervasive and sustained emotion that colors the perception of the world." Elevated mood is "An exaggerated feeling of well-being, euphoria, or elation. A person with elevated mood may describe feeling 'high,' 'ecstatic,' 'on top of the world,' or 'up in the clouds.'" The expansive mood is described as a "Lack of restraint in expressing one's feelings, frequently with an overvaluation of one's significance or importance" and, finally, irritable mood as "Easily annoyed and provoked to anger." These characteristics fail to communicate the essential part of the mood concept and its variations. Mood is here depicted as an internal feeling rather than an atmospheric experience of the world (Parnas 2012; see also Sect. 9.1). As defined by DSM-5, manic mood cannot clearly be differentiated from, e.g., the dysphoric mood of certain personality disorders. The specific quality of the manic mood is expressed more precisely by Zutt:

> [The manic patient experiences] a heady abundance of possibilities. *Everything has moved within his reach*, *everything seems easy*: the realization of the possibilities is so easy that the possibility is almost confused with reality. The manic patient attracts attention because of his distanceless talk. He knows no shyness, he feels confident and at home everywhere and with everybody. The depressive feeling of guilt is transformed into unscrupulousness, the ideas of impoverishment into wastefulness, hypochondria into a feeling of strength and health. Death is far away. The manic patient feels young and happy. *But that he is not happy is betrayed by the mixed states* in which agitation, restlessness, and irritability are shown… *The manic patient is living in a dedifferentiated world*. He talks to everybody, meddles in everything, is concerned with everything. By this "everything" a loss of the individual differentiation of the world is taking place: everybody becomes a brother and is treated like a brother. *The wealth of the manic patient is not genuine. In fact he is impoverished. He is*

> *living in an impoverished world in so far as it is dedifferentiated*. (1963, p. 845, our translation)

Tellenbach (1980, p. 63) refers to the *crampus transcendentalis*, a forced necessity of dwelling perpetually in the "world of objects." Binswanger (2012) gives an account of the apparently close but superficial contact with the manic patient, but he adds that the patient is not even close to himself but lives "away from himself." Nothing is able to hold his interest; he takes everything lightly. He lives entirely in the present, in the here and now.

The quality of perception, too, is altered, at least in hypomania (Parker 2014): the intensity of smell and taste is amplified and can persist for some time, e.g., foods tasting more sugary or fuller, vision is sharpened and more focused, there may be hypersensitivity for light, hearing is heightened, instruments are heard separately, and the patient may have an experience of judging or reading other people more precisely and of having an increased prescience and empathy. The perceptual changes are of a different quality than those seen in the schizophrenia spectrum. In hypomania there are changes in the intensity of perception agreeing with the mood, whereas in schizophrenia the changes are more like episodic perceptual distortion independent of the emotional state (Gross et al. 2008).

Mania is a psychosis by definition (hypomania is nonpsychotic). The DSM-5 specifier, with psychotic features, refers to the presence of delusions and hallucinations. The typical mood-congruent features have themes of grandiosity, invulnerability, paranoia especially with respect to others' doubts about the individual's capacities, etc. (p. 152). Similarly, ICD-10 lists mania with psychotic symptoms; mood-congruent psychotic symptoms are exemplified by grandiose delusions or voices telling the subject that he has superhuman powers.

According to Kraepelin, mania can be divided into severity stages (Kraepelin 1921, p. 54ff; Winokur et al. 1969, p. 15ff). In *acute* mania fleeting delusions of grandiose nature are frequently present. In *delusional* mania there may be visual and auditory hallucinations, religious delusions, and delusions of royal descent and of immense wealth. The thematic content of the manic hallucinations follows the delusional ideas, e.g., hearing a command from God, seeing the face of God or "Heaven in all its glory" (Winokur et al. 1969, p. 72), hearing the hallelujah chorus from the Messiah, hearing God, and seeing a box open with beautiful flowers (Carlson and Goodwin 1973). Hallucinations tend to be brief, fragmented, and related to religious themes, and to disappear early during recovery, and they are likely to be intermittent, to happen when the patient is alone, and to be more pronounced in severe, delirious states (Dunayevich and Keck 2000). The delusions in mania are often short lived and changeable, are poorly systematized, often have grandiose, religious, or paranoid themes, and are less fixed than in schizophrenia (Dunayevich and Keck 2000). As a rule, the manic patient is not guarded concerning his delusions, which he discusses with his surroundings. The final stage, *delirious* mania, has a sudden onset. It is accompanied by a dreamy state with clouded consciousness and confused hallucinations and delusions. There is senseless raving and excitement, disconnected talk, and senseless rhyming.

The DSM-5 specifiers, with mood-congruent psychotic features and with mood-incongruent psychotic features (p. 152), and their corresponding ICD-10 subtypes, refer to delusions and hallucinations with a thematic content consistent or inconsistent with the affective state (see also Sect. 9.2.6). Examples of mania-congruent themes mentioned are grandiosity and invulnerability. The inclusion of Schneiderian first-rank symptoms (FRS) into the mood-incongruent features is debatable. As originally defined by Schneider, these are viewed as closely related to the schizophrenia mode of experiencing (e.g., thought insertion being expressive of transitivism). The operational redefinition of such phenomena as nonspecific delusions renders their occurrence in mania more probable. However, FRS in supposed mania can often be explained better as excited schizophrenia. (Mood-incongruent features are discussed in Sect. 6.5).

11.1.2 Hypomania

DSM-5 requires for an episode of hypomania the fulfillment of at least three of the following criteria for at least 4 days (p. 124):

1. Inflated self-esteem or grandiosity
2. Decreased need for sleep
3. More talkative than usual or pressure to keep talking
4. Flight of ideas or subjective experience that thoughts are racing
5. Distractibility as reported or observed
6. Increase in goal-directed activity or psychomotor agitation
7. Excessive involvement in activities that have a high potential for painful consequences

The ICD-10 criteria are similar, missing #4 but including another one referring to increased sociability or overfamiliarity. As is evident from the description of some of these items, the delimitation from normality is far more difficult and requires contextual considerations. Stressful periods forcing a person to more active and sleepless may give a superficial impression of "hypomania." Recovery from depression may also, by way of contrast, give such a false impression. As hypomania often occur in patients with hyperthymic temperaments, it may be particularly difficult to identify the hypomanic episodes in these patients.

11.1.3 Mixed States

The coexistence of manic and depressive features is well-known and poses many questions as to the nature of bipolar psychopathology. As it is often used by clinicians as a sort of "litter box" for uncertain cases, the clear definition of these states is of decisive diagnostic importance. However, the concept is not quite clear. Kraepelin (1921, p. 99–109) describes six types of mixed states based on various

combinations of affective symptoms later conflated into two (Ghaemi 2007): dysphoric mania (when full mania is present with some depressive symptoms) and the depressive mixed state (when full depression is present with some manic symptoms). The Vienna research criteria (Berner et al. 1993) differentiate between stable and unstable mixed states. In the stable form, there is a persistent presence of a drive state contradictory to the mood state and/or the emotional resonance. In the unstable form, there are rapidly changing swings of opposite symptoms. Akiskal et al. (2005) also find indication that *agitated depression*, characterized by motor agitation rather than inhibition, is a mixed state. Maj et al. (2003) have compared a group of agitated patients with non-agitated and manic patients. They found them not to be elated or grandiose, but one-fourth had a cluster of symptoms with racing thoughts, pressured speech, and increased motor activity, and one-fourth had a paranoia-aggression-irritability cluster. Hallucinations are found to be significantly more frequent in bipolars with mixed states as compared with bipolars with mania or depression (Baethge et al. 2005).

The clear-cut division between depression and mania is arbitrary. There is evidence of depressive symptoms in most manic states. By continuous daily observation of manic inpatients, Kotin and Goodwin (1972) demonstrate simultaneous fluctuating depressive symptoms, such as tearfulness and suicidal thoughts, along with manic symptoms in the majority of cases. They refer, e.g., to a patient with mild grandiose symptoms, humming and singing, stating "I felt so low last night that if someone had given me a knife or gun–pow."

The prevalence of mixed states is closely dependent on the definitions of mania, depression, and the mixed states (Ghaemi 2007). In DSM-IV mixed episodes require that the criteria are met both for a manic episode and for a major depressive episode nearly every day, with rapidly alternating moods (corresponding to Berner et al.'s unstable form). This quite narrow definition results in an (equivalently) broader definition of mania and depression (allowing milder mixed features and in accordance with Kotin and Goodwin's views). The ICD-10 definition of a mixed episode is very similar. The DSM-5 broadens the definition of mixed states using a "with mixed features" specifier capable of capturing subthreshold nonoverlapping symptoms of the opposite pole (Vieta and Valentí 2013).

11.1.4 The Differential Diagnosis of Mania

As set out in the introduction to this chapter, any psychosis distinguished by psychomotor agitation and an uncritical, intrusive attitude is likely to be diagnosed as "mania." What is important for the differential diagnosis is the characteristic manic mood and the specific quality of the symptoms. Winokur et al. (1969, p. 70ff) point out some distinctive features of the psychotic symptoms of mania as compared with schizophrenia. Manic delusions are often evanescent, appearing and disappearing during the day, varying with the patient's total state, e.g., being more frequent when he is more active. At times the patient can be talked out of his delusions, giving the impression of being playful rather than deluded. The authors state that schizophrenic delusions are primary but also that they often are more "fixed"; however,

this may be true for paranoid schizophrenia, not the disorganized/hebephrenic type, and not all schizophrenic delusions are primary.

The recognition of an episodic course of illness may lead to a misjudgment of other psychoses having an episodic course as cases of bipolar disorder. Schizophrenia is expected to have a chronic course, but a small group of schizophrenia cases have a clear episodic course and some further cases a chronic course with episodic acute exacerbations. Eugen Bleuler found the episodic course not so rare, even with only slight traces of deterioration after each attack (Bleuler 1950, p. 239), and Manfred Bleuler (1978, p. 229–231) gives a case report of a man with classic schizophrenic psychoses of months' duration at approximately 6 years intervals (proband 27). On the other hand, we also meet bipolar disorder, e.g., with age-long depressions. As we will see, most important for the diagnosis are the specific mood and the specific quality of the psychopathology agreeing with this mood.

Gruhle (1932) describes hyper- and hypo-phases of spontaneity in schizophrenia, which may be confused with affective episodes. Schizophrenic psychosis sometimes sets in as a maniform syndrome soon followed by psychotic symptoms of schizophrenia; in other cases manic and schizophrenic symptoms appear together from the onset. Bleuler (1950, p. 304) states that "all the phenomena of manic-depressive psychosis may also appear in our disease [schizophrenia]; the only decisive factor is the presence or absence of schizophrenic [fundamental] symptoms"; that is to say that he accepted manic and depressive phases in schizophrenia in the presence of fundamental symptoms, but elsewhere in his monography, he did call attention to qualitative differences in the affective symptoms from those seen in manic-depressive psychosis:

> Ordinarily the schizophrenic manic is capricious rather than euphoric. The patients delight in all kinds of silly tricks, stupid and bad jokes. These pranks are quite typical of hebephrenics…
>
> They turn somersaults, stand on their heads, twist themselves like snakes, declaim, sing, pray…
>
> In his cheerful moods the patient remains mechanical as if he were ordered to be gay…
>
> Often the manic pressure of activity becomes a mere compulsion to move.
>
> (Excerpts from Bleuler 1950, p. 210–211)

Quoting Kraepelin, Bleuler also describes the activity of the manic phases of schizophrenia as bearing the characteristic features of monotony and compulsion, frequently carried out in a strikingly stilted manner (p. 306).

Grandiosity, often considered tantamount to mania, is also seen in other psychotic states such as schizophrenia and neurosyphilis (see Sect. 7.4.3). The diagnostic clue is their experiential structure. Manic grandiosity, reflecting the specific manic mood, is mundane, with the patient feeling extremely intelligent or rich, beautiful, attractive, having important tasks to do, etc. The manic patient's grandiosity is actively directed outward and toward the future, whereas the schizophrenic patient's grandiosity is passive and temporally static, and it has a solipsistic character with a stamp of double bookkeeping: the whole world is centered on the patient, or he *is* the world, he *is* (like) God, but at the same time he acts like a patient. Sass (2001) mentions a patient who proclaims himself Pope and yet nevertheless sweeps the floor without complaint.

The manic characteristics are not fulfilled in many cases clinically diagnosed with "mania." The expansivity is missing in the next two examples of inventiveness only superficially resembling mania:

> One patient reports good periods during which he is making inventions alternating with gloomy periods with inactivity. A closer examination reveals periods dominated by negative symptoms and better periods with fewer such symptoms. For several years he has been working on a project to develop an improved laundry basket. In the good periods he spends much of his time on this task, taking out books from the library to solve technical problems and drawing sketches. In both types of period his affective mood is neutral.
>
> Another patient in good mood brags a lot of creativity and inventiveness. As an example of this he mentions that the moment his girlfriend told him she needed a coffee table at the sofa by the window he got a splendid idea of how to design it.

Laundry baskets and coffee tables are miserable expressions of expansive manic projects! We expect manic patients to have expansive plans agreeing with their manic mood. These are also missing in the following example:

> A woman displaying pressure of speech and having certain grandiose ideas explains when questioned about her plans for the future that she wants to apply for disablement pension so she can devote herself full-time to cooking for her friends.

Both bipolar disorder and schizophrenia have been associated with increased creativity of either scientific or artistic kind (Thys et al. 2013). Bipolar artistic creativity is contended to be more emotional and socially acceptable and the schizophrenic type more alienated and related to modernism (Sass 1992b).

Akiskal and Puzantian (1979) have listed a series of circumstances leading to an erroneous schizophrenia diagnosis in case of true mania: mania superimposed on the substrate of an introverted personality, mentally retarded individuals with implausible delusions and senseless agitation, incomplete inter-episodic recovery or rapid cycling giving the impression of a more chronic course, a dysphoric-irritable mood rather than elation, euphoria and people-seeking behavior, paranoid ideation, mixed states, metabolic disturbance due to reduced caloric intake and alcohol and drug withdrawal states resulting in organic psychotic symptoms such as visual hallucinations, the confusion of flight of ideas with schizophrenic incoherence, and unexpected delusions suggesting Schneiderian first-rank symptoms and bizarreness but explicable from the manic mood. As an example of a bizarre delusion, they mention a manic patient boasting that her husband's penis was so long that every night it was being wrapped around her neck to suffocate her. In our clinic we had a young woman with classic mania believing she was pregnant with God's child, which was taken for a bizarre delusion. Bizarre delusions (defined as impossible) still being a criterion for ICD-10 schizophrenia, such patients can easily qualify for a schizoaffective disorder in this diagnostic system, even though the bizarreness in these cases bears a conspicuous expansive stamp of mania (for the validity of bizarre delusions, see Sect. 8.2).

The clinical picture of severe stages of mania approaches that of severe stages of schizophrenia due to the emergence of less-specific shared psychotic features:

bizarre ideas and behavior, incoherence, etc., obscuring the underlying psychopathological structure (Carlson and Goodwin 1973; Winokur et al. 1969, p. 69). The differential diagnosis can be made from the course of the psychosis: the manic patient has passed through classic stages of mania before entering into this severe stage.

Akiskal and Puzantian (1979) reproduce this tape transcript from an incoherent manic patient:

> I can write up or down. I can call the jolly folks and the sad folks. I have one church on Madison Avenue, another in downtown. You don't go around messing with churches. No, I wasn't asleep. I just disappeared. Nobody even knew where I was. I was on a spaceship, man. I went up to the tombs. I was my own incarnation and the Egyptians were talking to me. Just check it with Alexander the Great. I am not a slave. I am from Africa. There are superhuman people, you know. (p. 429)

But even in this example, the incoherence is retaining a touch of manic grandiosity as an underlying theme. The incoherence is partly caused by the lack of connecting links between the statements, as manic patients complain that the "brain [is] faster than their mouth." They also lose control over their speech, not being able to refrain from speaking their mind (Winokur et al. 1969, p. 69). Bleuler (1950, p. 307) stresses that the flight of ideas in mania is really not lacking in direction but that the direction changes with every moment, diverted by loose associations (e.g., rhyming) and distraction from external stimuli. Rhyming and distractibility are illustrated in Bleuler's examples (1934, p. 71):

> Birds of a feather, flock together.
> … Seeing the doctor's watch chain he speaks about it, or hearing the jingling of coins he immediately talks of dollars.

The direction is apparently completely absent in the following example from a schizophrenic patient.

> Can't we cure each other for nervous disorders, which are to be named, that a little child has told me, what do cod's eyes cost today? I was so pretty behind sunglasses for two weeks, before I remonstrated with myself. (Schulsinger 1980, p. 362, our translation)

Zerfahrenheit is an almost forgotten German term for the specific schizophrenic variant of incoherence (Sass 1992a; see also Sect. 5.8.1), according to Berze, resulting from a disbalance between affect and emotion. To delimit the manic incoherence from the schizophrenic form, it is also helpful to learn from Binswanger's observations of changes in manic language (2012, p. 199):

> Instead of a hypotactic sentence construction, organized with independent and dependent clauses, there is parataxis or the mere stringing together of clauses in which it is left to the hearer or reader to discover a logical connection between the separate clauses. The verb or activity word that actually animates and vitalizes the spoken or written representation increasingly recedes, and, where it yet survives, functions almost entirely in the present tense, less often in the past, and more and more rarely in the future.

In mania (and bipolar disorder in general), the patient is occupied with the *ontic* aspects of the world, the real world as it is presenting itself for the patient, whereas the schizophrenia patient, whose ontic attunement to the world is defective, is badgered by ontological questions as to the meaning or the true nature of the world (Bovet and Parnas 1993). Bleuler emphasizes the difference between true mania and maniform schizophrenia (1950, p. 211):

> Whereas the manic of the manic-depressive illness absorbs the world around him passionately and is most avid and eager to busy himself with the whole world, the schizophrenic manic more or less ignores the world.

The latter sentence is not absolutely true, as the schizophrenia patient, being preoccupied with a private reality dimension, at the same time relates to our shared world (by way of double orientation, see Sect. 8.1).

Schizophrenic excitement, counted as a catatonic manifestation, may be confused with manic excitement. The schizophrenic type is described as "apparently purposeless motor activity, not influenced by external stimuli" (ICD-10), and "ranging from childlike 'silliness' to unpredictable agitation" (DSM-5). The "raving madness" (Tobsucht) of catatonia (e.g., Huber 2005, p. 369) is senseless and purposeless motor and verbal activity, tearing off clothes, and aggressive and self-destructive acts. The excitation may be in the nature of stereotypies, not triggered by external stimuli. The manic excitement will usually be directed toward the external world, informed by expansive, purposive activities: important meetings to attend, people to meet, etc. It is an urge to act rather than an urge to move. In severe stages of mania, the excitement will apparently approach the "purposeless" type (e.g., running up and down the hall making animalistic noises, Carlson and Goodwin 1973). Catatonic excitement is also seen in other acute psychotic states than schizophrenia, e.g., organic and drug-related psychoses. Some of the psychopathological differences between mania and schizophrenia are summed up in Table 11.1.

Table 11.1 Psychopathological differences between mania and schizophrenia

	Mania	Schizophrenia
Temporal structure	The here and now	Static
Mood	State-like elated, expansive mood	Basic autistic-solipsistic mood
Megalomania	Mundane	Autistic-solipsistic
Delusions	Themes of grandiosity and wealth—ontic character	Solipsistic-autistic delusions—ontological character
Rapport	Uncritically extroverted	Autistic
Activity	Urge to act, inventiveness, often risky ventures	Bizarre acts, stereotypies
Language, thinking	Easily distracted, associations, flight of ideas; parataxis	Formal thought disorder
Self-disorders	No	Yes
Perception	Intensified	Distorted
Course	Episodic, free intervals	Often a chronic course

Paranoid (delusional) psychosis with a persecutory content appears in certain phases of mania (Tellenbach 1984), like in many other psychoses. There may be qualitative differences, e.g., misidentification with protective content in mania, taking motorcyclists for detectives helping the patient, very unlikely in genuine paranoid psychoses (ibid.).

The relation between borderline personality disorder (BPD) and bipolar disorder is disputed and not quite settled yet. Kernberg and Yeomans (2013) examine the pitfalls of the differential diagnosis of mania and BPD. The most frequent mistake, they say, consists in confusing the chronic emotional instability and affect storms of personality disordered patients with a truly hypomanic (or even manic) behavior. As opposed to BPD patients, bipolar patients in neutral phases do not show severe pathology of object relations and identity diffusion (on the narrative level, see also Sect. 12.4).

Disregarding the patient's background and the course of illness, clinicians may confuse mild stages of mania and hypomania with antisocial personality disorder. In mania the course of illness is episodic, and the manic patient will usually show a high level of inter-episodic social stability compared with the patient with personality disorder. The premorbid personality of bipolar patients can often be described as *typus melancholicus* characterized by orderliness and conscientiousness (see Sect. 9.2.1) or as cyclothymic or hyperthymic temperaments (see Chap. 7). A special temperamental type associated with unipolar mania, the *manic type*, has been suggested as well (Pössl and von Zerssen 1990), largely forming a contrast to the melancholic type. These people are described as active; strong willed; ambitious; the leader type, but easily distracted; not so consistent; with superficial contact to others; etc. As is evident, this type, closely related to the hyperthymia, cannot with certainty be separated from the affective illness itself.

Acute organic delirium often shows a "maniform" picture, but the playful, expansive character is often missing; the grandiosity of neurosyphilis is *monotonous* (Weitbrecht 1966; see also Chap. 7).

11.1.5 The Bipolar Spectrum

The DSM-5 bipolar spectrum, "Bipolar and related disorders," includes bipolar I disorder, bipolar II disorder, cyclothymic disorder, and bipolar disorders induced by drugs and medication and due to other medical conditions (p. 123). More controversial is the broadening of the spectrum by some researchers to include a further number of variants (Akiskal and Pinto 1999; Akiskal 2007; Klerman 1987). Here is an overview of Akiskal and Pinto's nomenclature:

Bipolar I: full-blown mania
Bipolar I½: depression with protracted hypomania
Bipolar II: depression with hypomanic episodes
Bipolar II½: cyclothymic disorder
Bipolar III: hypomania due to antidepressant drugs
Bipolar III½: hypomania and/or depression associated with substance use

Bipolar IV: depression associated with hyperthymic temperament
Bipolar V: recurrent depressions that are admixed with dysphoric hypomania
Bipolar VI: late onset depression with mixed mood features, progressing to a dementia-like syndrome

The further broadening of the spectrum into a "soft bipolar spectrum" related to bipolar II (Perugi and Akiskal 2002), including also certain anxiety disorders, eating disorder (especially with bingeing and purging behavior), and personality disorders such as borderline personality, has been criticized from many quarters. The implications of this broad view are the redefinition of these subaffective and uncharacteristic conditions as biologically determined members of the bipolar family and, consequently, a change of treatment strategies from psychotherapy to mood stabilizers (e.g., Hatchett 2010). Regarding the differential diagnosis between bipolar disorder and borderline personality, see also Sect. 12.4. Bipolar depression is treated in Sect. 9.2.1.

The recognition of especially hypomanic episodes, often ignored by the patients themselves, may be very difficult and lead to misdiagnosis of these cases as recurrent depression. Ghaemi et al. (2002) have, therefore, drawn up a list of anamnestic clues for bipolarity in uncertain cases:

1. Recurrent major depressive episodes (MDE) (>3).
2. Early age of onset of MDE (< age 25).
3. Family history of bipolar disorder in first-degree relative.
4. Hyperthymic personality.
5. Atypical depressive symptoms.
6. Brief MDEs (on average <3 months).
7. Psychotic MDEs.
8. Postpartum depression.
9. Antidepressant-induced mania or hypomania.
10. Antidepressant "wear off" (acute but not prophylactic response).
11. Lack of response to ≥3 antidepressants.

Based on these clues, the authors propose an algorithmic definition of bipolar spectrum disorder (having no spontaneous hypomanic or manic episodes). Under the term bipolar "soft signs," defined as non-manic features associated with subsequent manic or hypomanic episodes, Phelps (2012) paraphrases slightly the above clues of bipolarity, adding one:

12. Mood shifts are highly seasonal—e.g., winter depressions, though summer depressions are not uncommon.

11.1.6 The Course of Bipolar Disorder

Longitudinal studies show subsyndromal and syndromal symptoms half of the time in bipolar I disorder (Paykel et al. 2006) and even longer in bipolar II where depressive and sub-depressive symptoms preponderate. During the inter-episode phases,

bipolar patients suffer from sleep-wake impairments: sleep onset latency, wake (total amount of wake time) after sleep onset, and variability of sleep-wake variables (Ng et al. 2015). Inter-episode cognitive difficulties have been reported, e.g., by Zubieta et al. (2001), but a recent meta-analytic study failed to confirm this assertion (Samamé et al. 2014).

The time to recurrence of new episodes is decreasing with the number of affective episodes (Kessing et al. 1998), and the psychosocial functioning is increasingly impaired in the course of the illness (Sanchez-Moreno et al. 2009). Thus, in spite of its episodic nature, bipolar disorder is a chronic and often disabling disorder.

Rapid cycling bipolar disorder, defined as having at least four mood episodes per year (a DSM-5 specifier), is slightly more prevalent in women and in patients with bipolar II subtypes (Kupka et al. 2003). Cycling within the course of weeks to several days (ultrarapid cycling) and abrupt mood shifts of less than 24 h' duration (ultra-ultrarapid or ultradian cycling), suggested by Kramlinger and Post (1996), are more controversial and at least not accepted by DSM-5. Especially ultradian shifts may cause differential diagnostic problems. The ultrarapid shifts may resemble the affective instability of borderline patients, but as opposed to these, the mood shifts are not triggered by interpersonal conflicts like affects, and they usually occur in patients with slower mood cycles as well.

Affective symptoms in the pre-depressive and pre-manic phases of the illness have been identified in many studies, e.g., irritability and aggressiveness, sleep disturbances, depression and mania symptoms/signs, hyperactivity, anxiety, and mood swings (Skjelstad et al. 2010). These putatively prodromal features can be grouped as attenuated bipolar symptoms, general psychopathological features, and cyclothymic traits (Howes et al. 2011).

11.2 Acute Non-organic Psychoses

A number of non-organic "atypical" psychoses apparently without relation to either the schizophrenic or the affective spectra, accounting for up to 10 % of all psychotic disorders, have been identified (Jablensky 2001). Their classification is somewhat debatable or controversial. They originate from different nosological traditions often lacking general international acceptance. DSM-5's brief psychotic disorder (with stressor and postpartum-onset specifiers) and ICD-10's acute and transient psychotic disorder (with polymorphic and schizophrenia-like subtypes—see also acute schizophrenia below) belong to this heterogeneous group of psychoses. The acute psychoses are frequently confused with bipolar disorder and even schizophrenia.

The acute psychosis is often preceded by a provoking stressful or traumatic experience. Jaspers (Jaspers 1997, p. 383ff; Kraus 2013, p. 278ff) distinguishes between two kinds of pathological psychogenic reactions: the *pure precipitation of psychosis* such as a circular (bipolar) depression, or a thrust [German: Schub] of schizophrenia not corresponding to the provoking experience, and the *reaction proper*. In the latter, Jaspers lists three ways in which the reaction becomes meaningful: we

understand the extent of the trauma as adequate for the breakdown, the meaning, which the psychosis subserves, and the meaning of the psychosis. These elements form parts of the various definitions of acute psychoses. Kretschmer's sensitive delusions of reference (1974) fit in with this definition: there is an agreement between the premorbid personality, the external circumstances, and the delusional content.

The *acute or transient psychotic disorders* have been described within at least three different traditions: the cycloid psychoses (Germany), bouffées délirantes (France), and psychogenic or reactive psychoses (Scandinavia) (Pull et al. 2003; Jablensky 2001):

(1) The German tradition, originating in the works of Wernicke, Kleist, and Leonhard, outlines a group of psychoses, the *cycloid psychoses*, having positive symptoms of a different character than those in schizophrenia, missing the axial structural deformations of that disease, and implying a good prognosis (Sigmund and Mundt 1999; Salvatore et al. 2008). The axial syndrome of core schizophrenia is equal to the schizophrenic Gestalt that comprises deformation of emotional expression and affect, of thought, and of movement impulses or sequences. Leonhard's classification of cycloid psychoses contains three overlapping psychoses with dichotomous symptomatology:
   1. The anxiety-happiness psychosis having two polar syndromes, paranoid-hallucinatory anxiety syndrome, and paranoid-hallucinatory happiness syndrome
   2. The excited-inhibited confusion psychosis with either an excited or inhibited thematic confusion syndrome
   3. Hyperkinetic-akinetic motility psychosis, either as a simple hyperkinetic or akinetic syndrome

Each illness episode may then consist of one or more of these six cycloid syndromes.

(2) The *bouffées délirantes*, a group of psychoses introduced by Magnan and Legrain, are characterized by a sudden onset, polymorphous delusions and hallucinations, clouding of consciousness with emotional instability, and rapid return to the premorbid level of functioning. Relapses are seen after symptom-free intervals. Magnan and Legrain stated that the psychosis occurred without precipitating factors, but later stress-related variants have been identified (Pull et al. 2003).

(3) The *psychogenic or reactive psychoses*, presented and described by Wimmer (1926), are distinguished by an intimate relation to the precipitating factors not only regarding the formation of the psychosis but also the intelligibility of the psychopathology. Thus, in a predisposed person, exogenic factors (stress or trauma) determine the time of onset, the course, the content, and the termination of the psychosis in a meaningful way (Strömgren 1974; Bertelsen 2007). There are three clinical types, not sharply delimited from each other:
   1. Emotional reactions (depression, elation, and emotional paralysis).
   2. Disorders of consciousness (delirious and clouded states).

3. Various paranoid reactions and, among these cases, the sensitive reference psychosis (see Sect. 8.4), prison psychosis, and shared (or induced) psychosis (folie à deux). The latter seems to be a heterogeneous group of psychoses (Shimizu et al. 2007).[1]

Depression as an emotional reaction belongs to the paradepressions (Sect. 9.2.2). Delirious disorders of consciousness correspond to the acute polymorphic psychotic disorder, and the paranoid reactions include the acute paranoid psychosis of ICD-10.

There is a considerable overlap between the three classifications which all seem to describe a group of psychoses independent of the schizophrenia-bipolar dichotomy. They are reflected in the operational classifications as brief psychotic disorders (DSM-5) and acute and transient psychotic disorders (ICD-10).

The differential diagnosis with schizophrenia relies on the absence of the fundamental disorders (autism, self-disorder) in these psychoses. The episodic course itself is suggestive but not crucial for the differential diagnosis. Contrary to the prevalent assumption of a "natural" chronic course of schizophrenia (e.g., advanced by Lewis and Lieberman 2000), it may indeed have a phasic course, and a psychotic relapse may be precipitated by stressful events. Long-term follow-up studies show almost identical distributions with great diversity of course patterns (see the next section).

11.3 Acute Schizophrenia and Schizoaffective Disorder

Today, schizophrenia is usually understood as a psychosis having an insidious onset and a chronic course. However, long-term follow-up studies (reviewed by Häfner and van der Heiden in 2003) have demonstrated that a considerable part of the cases have an acute onset and/or a phasic (shift-like) course. As an example of a lesser-known course of illness, Manfred Bleuler's abovementioned proband 27 had acute, psychotic surges at intervals of about 6 years during which he was out of hospital working (Bleuler 1978). Langfeld separates schizophrenia cases with poor outcome, *typical schizophrenia*, from cases resembling schizophrenia but with good outcome, *schizophreniform psychosis*. The latter group is heterogeneous, also comprising affective and organic cases. Langfeld considers the following factors to be correlated with good outcome (Langfeld 1956; Berner et al. 1993):

1. An emotionally and intellectually well-developed premorbid personality
2. Demonstrable precipitating factors
3. Acute onset
4. A symptomatology characterized by a mixed picture, especially with admixtures of manic-depressive [i.e., bipolar] traits and cloudiness or symptoms of organic

[1] The general account is that one more powerful, active, intelligent deluded individual living closely together with a weaker individual induces his ideas to the latter.

(perhaps toxic) and psychogenic origin, and lacking the typical blunting of emotional life
5. A favorable environment before and after the outbreak of the disorder, with a psychologically correct attitude on the part of the surroundings to the problems of the patient

The opposite portends poor outcome. The fourth criterion will then imply autism, emotional blunting, depersonalization, and derealization in clear consciousness without admixtures from other psychoses.

Bergem et al. (1990), rediagnosing Langfeld's cases according to DSM-III-R and ICD-9 criteria, find a whole range of diagnoses including affective states and even nonpsychotic states. This kind of rediagnosing depends exclusively on diagnostic criteria; in order to settle the individual patient's affiliation to the schizophrenia spectrum, it is necessary to observe the fundamental processes (autistic features and self-disorders as implied by Langfeld's fourth criterion). In a 10-year follow-up study, Vaillant (1978) fails, however, to identify good-prognosis predictors and concludes that both remitting and non-remitting cases must be labeled with schizophrenia.

Schizophreniform disorder of DSM-5 requires the same criteria as schizophrenia, except the lowering of functioning, and duration between 1 and 6 months (schizophrenia having a 6-month criterion). There is a good-prognosis specifier indicated by onset within 4 weeks, confusion or perplexity (here meaning confusion, too; see also Sect. 5.8), good premorbid social and occupational functioning, and absence of blunted or flat affect, similar to Langfeld's criteria. ICD-10's acute schizophrenia-like psychotic disorder is narrower, requiring the same criteria fulfilled as in schizophrenia but with duration shorter than 1 month. This means that some cases of DSM-5 schizophreniform disorder have ICD-10 schizophrenia. The validity of DSM-IV schizophreniform disorder (similar to DSM-5) has been questioned, as it appears to be a heterogeneous category (Naz et al. 2002). With the abolition of bizarre delusions and first-rank symptoms from schizophrenia and, consequently, from schizophreniform disorder, the difference between the latter and brief psychotic disorder depends essentially on the duration criterion.

Micropsychoses and *brief limited intermittent psychotic episodes* (BLIPS) are found in the schizophrenia spectrum. Micropsychoses, or quasi-psychotic episodes, are very short-lived (minutes or hours) and rather infrequent psychotic-like experiences, found in ICD-10 schizotypy, being one of its criteria. The thematic content may be hypochondriac ideas, ideas of reference, and feelings of depersonalization (Hoch and Polatin 1949; Meehl 1964), but short-lived hallucinatory episodes occur as well (e.g., the patient hearing somebody calling his name). They must be distinguished from near-psychotic experiences found in DSM-5 borderline personality disorder (see Sect. 12.4) in the shape of paranoid or dissociative reactions (e.g., out-of-body experiences) only in states of acute stress in conflictual situations. BLIPS are actually not clinically defined states but originate in early intervention research. They form part of the criteria for at-risk mental states (ARMS) of the

CAARMS instrument (Yung et al. 2006; see Sect. 8.7). With duration of up to 1 week, they usher the imminent psychotic breakdown. *Daily* short-lived psychotic episodes mean manifest psychosis. However, the border between imminent and manifest psychosis is fluid and arbitrary and depends exclusively on the criteria of the diagnostic system concerned.

Schizoaffective psychosis, a diagnosis defined as a mixture schizophrenic-like and affective symptoms (as suggested by the term), will usually have a more episodic course than schizophrenia. Kasanin's original notion of an acute schizoaffective psychosis (1933) was based on descriptions in the literature, e.g., of delusions of persecution in some depressive cases and of episodic course of schizophrenia and on personal observations. Yet, the exact quality of the psychopathology of his nine cases is rather obscure, as he seems more concerned with the presence of psychotic symptoms and their thematic content than basic structure of the clinical states (i.e., the depressive mood or autism). What characterizes his diagnostic category is normal prepsychotic personality, sudden first onset in the twenties or thirties, psychosis marked by emotional turmoil, and "distortion" of the outside world and "false sensory impressions" in some cases, lasting a few weeks to a few months and followed by a recovery. These characteristics are similar to those of brief psychotic disorder (DSM-5) or acute polymorphic psychosis (ICD-10).

The meaning of the diagnosis schizoaffective psychosis has changed over the years with changing diagnostic systems. In DSM-II and ICD-8, it designated a subtype of schizophrenia, whereas and in DSM-III, it became a diagnosis of exclusion. Its delimitation depends on the definitions of mood disorders and schizophrenia, the proportion between the affective and schizophrenia-like symptoms, and their duration. DSM-IV requires a period during which there is a mood episode with prominent schizophrenic symptoms and at least 2 weeks with hallucinations or delusions but without prominent mood symptoms. Furthermore, mood symptoms must be present for a substantial part of the illness episodes. In DSM-5 the 2 weeks with psychotic symptoms in absence of mood symptoms should occur during the lifetime duration. ICD-10 requires an episode of moderate or severe affective (mood) disorder and during the same episode schizophrenic symptoms (first-rank symptoms, bizarre delusions, severe thought disorder, or severe catatonia) concurrent with the mood symptoms for some time but without a demand for the absence of mood symptoms in a period of time. These definitions, defining different populations, have little to do with the original definition. DSM seems to define a more chronic illness and ICD a more episodic one.

There are several different explanations of the apparent overlap between schizophrenia and affective disorder (cf. Cheniaux et al. 2008; see also Sect. 6.5). The clinical reliability of ICD-10 schizoaffective disorder is poor (Vollmer-Larsen et al. 2006). The diagnosis *should be reserved* for cases with prominent mood *and* schizophrenic symptoms, as implied by the above diagnostic criteria, while it is often used erroneously in cases with productive psychotic symptoms of any kind accompanied by sadness or even pseudo-depressive negative symptoms, e.g., psychotic depression or schizophrenia with prominent negative symptoms, but sometimes even in nonpsychotic cases, e.g., with schizotypal features and anhedonia.

The *Urstein psychosis* (Urstein 1909) is a by now obsolete term designating an affective psychosis of manic or depressive type developing into a catatonic stage resembling catatonic schizophrenia. Recently, catatonia has been recognized outside the schizophrenia spectrum, and the former Urstein cases will now be diagnosed chiefly with bipolar disorder.

11.4 Substance-Related Psychoses

Substance-induced (or toxic) psychoses and withdrawal psychoses may simulate acute psychoses of any type (see also Sect. 7.4).

Acute and chronic psychosis can be *induced* by a number of psychoactive drugs: illegal drugs like amphetamine and other central stimulants, cocaine, hallucinogens, and cannabinoids, and also legal drugs like corticosteroids. The clinical picture may be impossible to distinguish from that of affective and schizophrenia spectrum psychoses (see also Sect. 7.4.2).

Discontinuation of alcohol or benzodiazepine abuse may give rise to delirium with symptoms like confusion and disorientation—absent in affective and schizophrenia spectrum psychoses but present in the initial stages of some acute psychoses. The onset of delirious withdrawal symptoms from long-half-life benzodiazepines can be delayed up to a couple of weeks, which may blur the causal explanation: patients deprived their drugs at admission then suddenly develop inexplicable delirium many days later, e.g., in the postoperative phase.

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Detecting Disordered Personality Pattern

12

Abstract

DSM-5 defines personality disorders as "enduring deviating patterns of inner experience and behavior setting in during childhood or adolescence, usually causing subjective distress and problems in social functioning." A personality disorder is not just a collection of personality traits and cannot simply be deducted from single salient traits. Rather, it is a consistent pattern of traits related to a specific being in the world, reflected in certain types of interpersonal relations and in a characteristic life history. Later onset indicates personality change due to trauma, organic brain disease, or other categories of mental illness.

The DSM and ICD definitions of borderline personality disorder (BPD) and schizotypal disorder are mixtures of personality traits and symptoms and, therefore, not consistent with the strict definition of personality disorder. BPD, a widely used and misused diagnosis, occupies much of this chapter. It is frequently used for any mental state characterized by impulsivity and self-harming acts, even psychosis (e.g., disorganized schizophrenia), but psychotic symptoms (incl. hallucinations) *do not* belong to personality disorders. Patients with BPD may at most experience near-psychotic paranoid or dissociative reactions (such as depersonalization) in stressful situations.

Certain personality types and temperaments have been associated with mental illness. The association between BPD and bipolar disorder is debated. Premorbid personality and subclinical types are described in affective disorders (e.g., typus melancholicus) and in the schizophrenia spectrum (e.g., compensated schizotypy).

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Some central terms in this area are being used in almost identical everyday sense: temperament, personality, and character. In fact, they all have a specific psychological meaning. *Temperament* designates the inborn qualities more or less impervious to upbringing and other environmental influences, but conditioning the personality formation, *personality* refers to the individual (narrative) pattern of reactions and behavior characteristic of a person, and *character* refers to underlying ethical and motivational aspects of personality. Temperament is of interest for psychiatry as a way of describing the premorbid traits of mental illness, e.g., bipolar disorder and schizophrenia; personality is of interest by virtue of its deviating forms, the personality disorders. Personhood, closely related to the narrative self, refers to the totality of personality, roles, and personal experiences. The narrative self is disturbed in personality disorder and other chronic mental conditions, but the basic self (core self) refers to a basic level disturbed exclusively in schizophrenia spectrum disorders (see Sect. 8.3). "Person" in early psychiatric literature may refer to this basic level. Thus, Bleuler's disorders of the "person" correspond to disorders of self-awareness, e.g., transitivism (Bleuler 1950, p. 143–147).

12.1 Personality Disorder

In DSM-5 personality disorder is defined as "an enduring pattern of inner experience and behavior that deviates markedly from the expectations of the individual's culture, is pervasive and inflexible, has an onset in adolescence or early adulthood, is stable over time, and leads to distress or impairment" (p. 645). The general DSM-5 criterion of distress or dysfunction, "the disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning" (p. 21), applies to personality disorders, too. DSM-IV introduced a multiaxial diagnostic system with personality disorders placed on axis II; DSM-5 has moved back to a non-axial system, like ICD-10. In ICD-10 personality disorder is characterized like this:

> These types of condition comprise deeply ingrained and enduring behaviour patterns, manifesting themselves as inflexible responses to a broad range of personal and social situations. They represent either extreme or significant deviations from the way the average individual in a given culture perceives, thinks, feels, and particularly relates to others. Such behaviour patterns tend to be stable and to encompass multiple domains of behaviour and psychological functioning. They are frequently, but not always, associated with various degrees of subjective distress and problems in social functioning and performance. (ICD-10, 1992, Blue Book, p. 200)

There are, however, a number of debatable issues connected with these definitions (Maj et al. 2005): whether the distress-dysfunction criterion is really fulfilled, whether they all represent enduring patterns of inner experience and behavior, the relationship between "normal" personality traits and personality disorders, the fact that several of the specific definitions of personality disorders are mixtures of personality traits, behavior, and symptoms (e.g., schizotypal and borderline personality

disorders; see also Tyrer (2009)), and the overlap between the disorders. Personality disorder must be distinguished from later-onset *personality change* caused by chronic mental illness (e.g., bipolar disorder), psychotrauma, physical illness, brain disease, drug abuse, etc. For organic personality change, see Sect. 7.4.6.

Personality disorders seem to form continua or spectra, and therefore overlaps are common. Dimensional approaches to personality diagnostics have been suggested, e.g., in the preparatory work of DSM-5 but abandoned in the final version (Zachar et al. 2016). Mutually related disorders are, however, still grouped in the three clusters, A, B, and C. In an *alternative model* for personality disorder, presented in section III (DSM-5, p. 761ff.), personality disorders are characterized by impairments in personality *functioning* and pathological personality *traits*, permitting the diagnosis of personality disorder-trait specified (PD-TS), when criteria for a specific disorder are not met. A proposal for ICD-11 comprises five levels of personality disorder and five monothetic trait domains (Tyrer et al. 2011).

The affiliation of certain personality disorders to mental illness is much debated. The relationship between the premorbid personality disorder and subsequent mental illness may be accidental, the personality may preform the psychopathology (Birnbaum 1974), the personality may represent the fundamental disorder generating the psychopathology (*typus melancholicus* leading to melancholia; see Sect. 9.2.1), and the personality disorder may also be seen as a subclinical or subthreshold mental illness, either condition being poles along a continuum (borderline personality disorder seen as subthreshold bipolar disorder, e.g., Perugi et al. (2003); Akiskal (2004)).

12.2 The Recognition of Specific Personality Disorders

Personality is played out in the interpersonal field. The valid investigation of a personality pattern is performed by examining the person's social life. Personality traits should be assessed in their specific psychosocial context. Self-rating instruments with statements like "I get easily upset" listed out of context are of limited use here. Patients often have idiosyncratic interpretations of such statements, and the question of reliability (and hence validity) is left to them, so to speak.

> A young man reported during a therapy session that he often "ran amok" in conflict situations. The clarification revealed that what he really meant by this was having an inner feeling of rage but without displaying any signs of anger.

The overall structure of personality, e.g., punctuality vs. impulsivity, or social withdrawal vs. extroversion, can often be read from the social history, even without any explicit mention of personality traits. Consider this example:

> This is a 29-year-old man. He had to repeat the kindergarten-grade as he appeared not to be ready for school. He had behavioral problems in school, kept bad company, and was involved in petty crime and cannabis use. He missed school and failed to pass the school leaving exam. Afterwards he has had many attempts at getting a vocational education but

never succeeded in carrying through any of them. He takes odd jobs and is frequently unemployed. He has once served a prison sentence for burglary. He has a high turnover of friends and sexual partners.

Such a life history is indicative of a low level of structure, antisocial traits, and impulsivity, but making the diagnosis demands a closer analysis. The above example could turn out to be a case of personality disorder of dissocial or even borderline type, but an organic disorder or a case of disorganized schizotypy or schizophrenia cannot be ruled out. The superficiality of personality diagnosis is one of the main causes of psychiatric misdiagnosis.

12.3 Patterns of Personality Disorder

Despite the dimensional character of personality traits, certain prototypical patterns of disordered personality stand out. The DSM-5 defines ten specific personality disorders distributed over three clusters:

Cluster A	Paranoid personality disorder
	Schizoid personality disorder
	Schizotypal personality disorder
Cluster B	Antisocial personality disorder
	Borderline personality disorder
	Histrionic personality disorder
	Narcissistic personality disorder
Cluster C	Avoidant personality disorder
	Dependent personality disorder
	Obsessive-compulsive personality disorder

Cluster A comprises personality disorder related to the schizophrenia spectrum (Parnas et al. 2005a), cluster B is characterized by impulsivity and emotional lability, and cluster C is characterized by anxiety and fearfulness, more or less corresponding to former character neuroses.

ICD-10 lists eight specific personality disorders without any attempt at clustering: the paranoid, schizoid, dissocial (i.e., antisocial), emotionally unstable, histrionic, anankastic (i.e., obsessive-compulsive), anxious (avoidant), and dependent personality disorders. The emotionally unstable personality disorder is further divided into impulsive and borderline subtypes.

Schizotypal personality disorder is generally regarded as a nonpsychotic variety of schizophrenia. Originally named latent schizophrenia by Bleuler (1950) and schizoid personality by Bleuler and by Kretschmer (1925), this condition was included in the concept of schizotypy by Rado (1953). With this term Rado referred to the whole schizophrenia spectrum, which he graded into three levels: compensated schizotypy, a subclinical form rarely seen in patients, decompensated schizotypy more or less

corresponding to the clinical diagnosis, and disintegrated schizotypy equal to schizophrenia (see Sect. 8.6). The borders of schizotypy depend arbitrarily on the definition of schizophrenia and the algoristic rules of the diagnostic system in general.

The DSM-5 diagnosis of schizotypy, defined as a personality disorder unlike the ICD-10 definition, is cleared of micropsychoses, but, nevertheless, the diagnostic criteria make up a mixture of personality traits, signs, and symptoms (e.g., ideas of reference; see also Tyrer (2009); Maj et al. (2005)). The *schizoid personality disorders* of DSM-5 and ICD-10, being the remainder from the separation of schizotypal and paranoid personalities from the original schizoid of Bleuler and Kretschmer, would not typically fulfill the dysfunction-distress criterion of DSM-IV (Parnas et al. 2005a) and is hardly a *clinical* diagnosis at all.

The subjectivity of personality disorders has been dealt with by authors of phenomenological-anthropological and psychodynamic views. Shapiro (1965) describes the "neurotic styles" of a handful personality disorders: the obsessive-compulsive, paranoid, hysterical, and impulsive styles, as well as some variant traits of special impulsive styles (psychopathy and the passive-weak character). By *style* he means "a form or mode of functioning—the way or manner of a given area of behavior—that is identifiable, in an individual, through a range of his specific acts," and by *neurotic style*, "those modes of functioning that seem characteristic, respectively, of the various neurotic conditions. I shall consider here, particularly, ways of thinking and perceiving, ways of experiencing emotion, modes of subjective experience in general, and modes of activity that are associated with various pathologies" (p. 1). As it appears from this, the "styles" are defined a little broader than DSM-5 and ICD-10 personality disorders.

12.3.1 The Obsessive-Compulsive Style

Shapiro describes the obsessive-compulsive style (1965, p. 23–53) as characterized by a rigid, inflexible, dogmatic way of thinking accompanied by a corresponding inattention and insensitivity to other people. These people's attention is intensely and narrowly focused on technical details with work activity as the pivotal point. Everything seems deliberate: they are driven by necessity; relaxation from this deliberateness is unsafe. They are stubborn and do not tolerate interference from others. They identify with their roles, play their roles so to speak. In taking decisions they invoke rules, customs, or moral principles. So, the decision, too, is transformed into a technical problem of applying the correct principle. The obsessional ideas (e.g., about contamination) sometimes seem to border delusions, but they do not actually believe them to be true, and they are in doubt and state that it just might be so (unlike pseudo-obsession; see Sect. 8.4). We meet an apparent paradox, doubt combined with dogma, the latter serving to overcome the doubt.

According to Straus (2012), the obsessive-compulsive person lacks the normal "ease" (Gelassenheit) facing a world experienced as "decayed," which he links to the patient's compulsion of washing and scrubbing his own body. The compulsive patient seeks to avoid the necessity of personal responsibility and improvisation,

and he tends to plan his everyday life to the last detail. Action in one direction leads the patient to wish to undo every act, even by literally, say, retracing a path. This is a defensive mechanism, different from ambivalence of the schizophrenia spectrum which is painful inability to choose between different options due to the coexistence of contradictory feelings (Parnas et al. 2005b).

The diagnostic criteria of DSM-5 obsessive-compulsive personality disorder (p. 678–679) cover some of these aspects (but miss the basic dynamics of the disorder): preoccupation with details, rules, perfectionism, devotion to work, scrupulosity and inflexibility, inability to discard worn-out things, reluctance to delegate tasks to others, a miserly spending style, rigidity, and stubbornness. The same applies to the ICD-10 criteria.

Obsessions and compulsions are dealt with in Sect. 10.4.

12.3.2 The Paranoid Style

This style (Shapiro, p. 54–107) is a severe personality disorder sometimes bordering on paranoia. Shapiro describes two poles of this style: furtive, constricted, apprehensively suspicious individuals and rigidly arrogant, more aggressively suspicious, megalomaniac ones (p. 54). It bears some resemblance to the obsessive-compulsive style, as both are characterized by "rigid and tense hypertrophy of normal functions and subjective experiences of autonomy" (p. 107). But the paranoid style is more extreme, antagonistic, and unstable. The paranoid person's thinking is rigid, suspicious, and prejudiced. He is searching for confirmation, for "clues," and everything that does not confirm his expectation is "sham" or threatening. There is a loss of context and proportionality, the cognition is immune to correction. Shapiro elaborates the projection at work. What is projected is the internal tension which is transformed into continuous tensions toward the external world, but not necessarily the themes of internal tension. The world is experienced as threatening. Shapiro sees self-reference as an intrinsic aspect of projection. Sometimes overt psychosis may ensue in some cases as an encapsulated delusion, in other cases overvalued ideas in the form of fanaticism, but in most cases, there is just a continuous state of projective awareness.

Once again, some of these aspects are reflected in the criteria of DSM-5 paranoid personality disorder: a pervasive distrust and suspiciousness of others present in various contexts in the shape of suspicion of others exploiting or harming him, preoccupation with doubts about the loyalty, reluctance to confide in others, reading hidden meanings into remarks or events, bearing grudges, perceiving attacks, and suspicions regarding the fidelity of one's partner. Thus, the criteria are paraphrases of the same trait. The ICD-10 criteria are similar.

Nonorganic paranoid (delusional) psychosis is treated in Sect. 8.8 (chronic) and Sect. 11.2 (acute).

12.3.3 The Hysterical Style

The hysterical style (Shapiro, p. 108–133), forming a glaring contrast to the obsessive-compulsive style, is distinguished by impressionistic cognition, which is global, diffuse, and lacking in sharpness. The cognitive style is characterized by three features: the relative absence of active concentration, the susceptibility to transient, impressive influences, and the relatively nonfactual subjective world. The hysterical person relies on "hunches"; has a romantic, sentimental, nostalgic attitude to the world populated by "heroes and villains"; and notices everything as vivid, colorful, and emotionally charged. The emotionality appears exaggerated and unconvincing (histrionic means theatrical), but not as something consciously staged. Subjectively the hysterical person does not have a sense that things really count, and this applies even to his/her own emotions, e.g., angry outbursts being something that has just "passed through" him/her, not representing his/her real feelings about a matter. The outbursts are isolated, quickly subsiding episodes in a personality usually being inhibited rather than impulsive (unlike the outbursts in borderline personality disorder). The personality is characterized by a too quick and insufficient organization, refinement, and integration of mental contents. The shallowness or lack of authenticity of these contents should not, however, be mistaken for the loss of first-person perspective found in the schizophrenia spectrum: here the very appearance of feelings or thoughts is experienced as distanced and anonymous, as if not belonging to the subject.

Sigmund et al. (1998) distinguish between two manifestations of hysterical (histrionic) personality disorder; the "classical" form, referred to as "expressive-expansive;" and a "passive-inhibited" manifestation with passive-feminine, passive-aggressive, and asthenic traits. The DSM-5 histrionic personality disorder is defined as a pattern of excessive emotionality and attention seeking with criteria like discomfort when not the center of attention, seductive behavior, rapidly shifting and shallow expression of emotions, using physical appearance to draw attention to oneself, theatricality and exaggerated expression of emotion, suggestibility, and considering relationships as more intimate than they are. This definition misses the characteristic cognitive and emotional style communicated by Shapiro.

12.4 Impulsive Personalities

Impulsivity is of special interest for psychiatry as it frequently leads to behavior resulting in hospitalization and causes differential diagnostic problems. Impulsivity is increasingly diagnosed as borderline personality disorder (BPD) irrespective of the underlying psychopathological structure. DSM-5 estimates its prevalence among psychiatric inpatients to be about 20 % (p. 665). The recognition of the

organizing structure underlying impulsivity is, therefore, of decisive importance for differential diagnosis.

Shapiro (1965, p. 134ff.) points out the close relation between impulsivity and passivity, both revolving around the impairment of the sense of deliberateness and intention. As an example of a passive style is the weak-willed alcoholic giving in for his need to drink. The patient pleads "guilty without premeditation" and tends to externalize responsibility. Impulsive acts, on the other hand, are speedy, abrupt, and lacking in long-term planning.

The borderline concept originates in the psychoanalytical literature as a borderland between neurosis and psychosis. BPD should be seen as a *severe* personality disorder. DSM-5 BPD is characterized by a pervasive pattern of instability of interpersonal relationships, self-image, and affects and marked impulsivity that emerges by early adulthood and is played out in a variety of contexts. The patient should meet at least five of nine diagnostic criteria:

1. Frantic efforts to avoid real or imagined abandonment
2. A pattern of unstable and intense interpersonal relationships
3. Identity disturbance: markedly and persistently unstable self-image or sense of self
4. Impulsivity in at least two areas that are potentially self-damaging
5. Recurrent suicidal behavior, gestures, or threats or self-mutilating behavior
6. Affective instability due to a marked reactivity of mood
7. Chronic feelings of emptiness
8. Inappropriate, intense anger or difficulty controlling anger
9. Transient, stress-related paranoid ideation or severe dissociative symptoms

ICD-10 has a different structure. The patient must first meet three of the criteria for the impulsive type of the emotionally unstable personality disorder (always including #2: quarrelsome behavior or conflicts), then three criteria for the specific borderline type:

Impulsive type:

1. A marked tendency to act unexpectedly and without consideration of the consequences
2. A marked tendency to quarrelsome behavior and to conflicts with others, especially when impulsive acts are thwarted or criticized
3. Liability to outbursts of anger or violence, with inability to control the resulting behavioral explosions
4. Difficulty in maintaining any course of action that offers no immediate reward
5. Unstable and capricious mood

Borderline type:

6. Disturbances in and uncertainty about self-image, aims, and internal preferences (including sexual)
7. Liability to become involved in intense and unstable relationships, often leading to emotional crises

8. Excessive efforts to avoid abandonment
9. Recurrent threats or acts of self-harm
10. Chronic feelings of emptiness

As pointed out by Tyrer (2009), several of these criteria are symptoms rather than personality traits. The two systems share most of the criterial categories. In spite of this sizable overlap, there are important differences. The DSM-5 criterion of near-psychotic symptoms (#9), absent in ICD-10, is elaborated in this way:

> During periods of extreme stress, transient paranoid ideation or dissociative symptoms (e.g., depersonalization) may occur, but these are generally of insufficient severity or duration to warrant an additional diagnosis. These episodes occur most frequently in response to a real or imagined abandonment. Symptoms tend to be transient, lasting minutes or hours. (p. 664)

This criterion has given rise to a lot of misunderstanding and misdiagnosis. In clinical practice it is often read as *any psychotic symptoms* and *independent of stress*, which means that any psychosis accompanied by impulsivity may be diagnosed as borderlines. We often hear mention of socially isolated patients hearing voices all day long being clinically diagnosed as borderlines. And even among researchers, supposed to follow the diagnostic criteria, "voice hearing" in borderlines seems to be an established fact (see, e.g., Schroeder et al. (2012); Tschoeke et al. (2014); Pearse et al. (2014)). This is in conflict with the very idea of personality disorder and the general criterion of personality disorder as "not better explained as a manifestation or consequence of another mental disorder" (DSM-5, p. 647) and not "explained as a manifestation or consequence of other adult mental disorders" (ICD-10, p. 123): hallucinations belong to the category of psychoses. One way of evading this dilemma seems to be naming the hallucinations "pseudohallucinations" or "dissociation" (e.g., Moskowitz and Corstens (2008); see also Sect. 8.11). This is not what is meant by dissociation in the DSM criterion (cf. ICD-10), which rather refers to the narrow, classical definition of dissociation as a loss of integration between memories, awareness of identity and immediate sensations, and control of bodily movements, released under strong emotional turmoil in stressful or traumatic situations, e.g., as depersonalization with out-of-body experiences. The term, dissociation, has widened in recent years to mean practically any kind of mental splitting. In this sense any hallucination will imply some kind of mental splitting (e.g., the patient not recognizing her voices as arising from herself), rendering the differentiation between hallucination and "dissociation" tautologically. But auditory hallucinations are psychotic symptoms, and hearing voices every day belongs to psychoses, not dissociative disorders or personality disorders. So, borderlines cannot, by definition, hear voices.

Another important difference between DSM-5 and ICD-10 borderline personality disorders is the criterion #2 of ICD-10 (absent in DSM-5), "a marked tendency to quarrelsome behaviour and to conflicts with others" being mandatory for the diagnosis. This criterion underlines the interpersonal difficulties of the borderline

patient, and it should (if respected by clinicians) exclude a great deal of pseudo-borderline cases which are impulsive and self-destructive but rarely in conflict with others.

The self-mutilating behavior (DSM-5 #5) and self-harm (ICD-10 #9) are often taken as sure signs of borderline states. But in a broad sense, self-mutilation is seen in many different mental conditions. The analysis of the specific circumstances is of great importance for the differential diagnosis (Claes and Vandereycken 2007), first of all the motivation (diminishing tension, obtaining self-affirmation, feeling one's body, self-punishment, self-destructiveness), the choice of method (cutting, biting, abrading, etc.), and the frequency and severity of the intended injury. Self-injury can be divided into *delicate*, or superficial, and *severe* self-mutilation, the latter often resulting in permanent disfigurement (Parrott and Murray 2001). The delicate type is prevalent in borderlines, cutting the wrist being the preferred method. Borderline patients harm themselves in stressful situations, and the act itself may express a "cry for help" or self-punishment reflecting their self-loathing, anger, or self-distraction (Brown et al. 2002). Stereotypical acts like headbanging are seen in mental retardation and in the Tourette syndrome (Favazza and Rosenthal 1990). Bizarre patterns, e.g., one patient scratching "FUCK" on her forehead and shaving off the left side of her hair, and grotesque acts like self-amputation, suggest psychosis. In schizophrenia the motivation may be the alleviation of the inner pain by the physical pain, and it may also be psychotic, e.g., cutting one's wrists in order to drain out the evil blood. The ICD-10 self-harm criterion of borderline personality disorder also covers nonphysical acts (such as dangerous sexual behaviors).

The description of the borderline personality disorder as reflected in the diagnostic criteria has been criticized. Based on patient narratives, Miller reports on a number of differences in the symptoms described by clinicians (and in some diagnostic criteria) on one side and those described by patients on the other side (Miller 1994, Table 12.1, p. 1216).

The first row of the table (corresponding to DSM-5 #3, ICD-10 #6) concerns the level of self. What is impaired in borderline states is the *narrative self*. The patient is sensitive to other people's judgment and has a labile self-image, reflected in statements like "I have such low esteem of myself. I am constantly comparing. . . . I feel that everyone is superior to me" (Miller 1994). But she has an intact sense of *basic self*, the sense of existing as an individual (often defective in schizophrenia spectrum patients, who experience a lack of inner nucleus and feel anonymous or

Table 12.1 Descriptors of borderline personality disorder (Miller 1994)

Clinician	Patient
Identity disturbance: impaired sense of self	Cohesive identity: sense of impaired self
Diffuse boundary between self and others	Rigidly demarcated boundary between self and others
Global avoidance of being alone	Situation-specific avoidance of being alone
Instability of mood	Chronic dysphoria

empty). The second row, the diffuse boundary between self and others, is actually not a criterion of either diagnostic system. An impaired boundary (e.g., the patient mixing herself up with her interlocutrix) implies transitivism that belongs to the schizophrenia spectrum (see self-disorders, Sect. 8.3), not to personality disorder. The last row (cf. DSM-5 #6, ICD-10 #5) concerns the difference between mood and affect. The basic mood, the non-intentional background sense (see also Sect. 9.1), appears to be dysphoric. The instability is expressive of intentional, situational affective changes due to hypersensitivity and on the background of the dysphoric mood. The borderline patient's labile identity is reflected in these situational affective changes. Affective instability, too, is often taken as equivalent with borderline personality disorder, but the distinction between the specific borderline type and other types of affective instability is crucial for the differential diagnosis.

> A 35-year-old woman is diagnosed with borderline personality disorder based on a pattern of explosive affective instability and self-destructive acts. She reports 20–30 unpredictable shifts during the day totally incomprehensible in the situation. While having a peaceful talk with her husband she suddenly turns murderously hateful towards him, and feeling dispirited she suddenly turns euphoric for no apparent reason. A closer examination reveals verbal hallucinations pointing to a schizophrenia diagnosis. (Our example)

The borderline prototype outlines extroverted, hypersensitive, and highly reactive personalities. Therefore, the diagnosis is *not in agreement* with social isolation and blunted affect. So true "comorbidity" to schizotypal disorder does not make sense. There are, however, schizophrenia spectrum patients (frequently first episode) who are neither isolated nor blunted. In these cases, the demonstration of psychotic symptoms, the presence of self-disorder, and a mental state examination revealing formal thought disorder and inadequate or mannered expression will be indicative of schizophrenia spectrum. Furthermore, late onset will support the suspicion of a schizophrenic process, as a personality disorder must be demonstrable in adolescence or early adulthood. The conditions within the schizophrenia spectrum most frequently confused with borderline personality disorder are disorganized (or hebephrenic) schizophrenia and disorganized varieties of schizotypal (personality) disorder, known under different historical names such as heboidophrenia (Kahlbaum 2002), moral idiocy (e.g., Kretschmer's subtype of schizoidy 1925, p. 194), and pseudopsychopathic schizophrenia (Dunaif and Hoch 1955); see also Sect. 8.6. A comparison between BPD and disorganized schizophrenia is given in Table 12.2.

The affiliation of BPD to the affective spectrum is controversial. Some researchers underline the apparent similarities. According to these, there appears to be an overlap between BPD, bipolar II, and atypical depression suggesting an underlying cyclothymic temperamental matrix (Perugi et al. 2011), and rapid cycling in bipolar disorder seems to overlap with affective instability of BPD (McKinnon and Pies 2006).

Other researchers underline the differences (e.g., Bassett 2012; see also Table 12.3). There is an important difference between mood and affect (see Chap. 9) and, therefore, between rapid-cycling mood and borderline affective lability. BPD has a trait-like character, and borderline depression is of a different kind (Stanghellini and

Table 12.2 Psychopathological differences between borderline personality disorder and hebephrenic schizophrenia

	Borderline personality disorder	Hebephrenic (disorganized) schizophrenia
Onset	Childhood/early adolescence onset	Youth onset (adolescence into the 20s)
Course	Life history characterized by impulsive acts in conflictual situations	Life history studded with incomprehensible changes and breaks
Relations	*Intensive*, unstable relations	Unstable, not so intensive relations, social phobia, social isolation
Rapport	Good rapport, extroversion	Inadequate or blunted affect
Instability	Emotional instability related to conflicts	More unaccountable instability
Self-harm	Impulsive self-destructive acts in conflicts	Self-destructive acts, often bizarre
Identity	Disturbances of narrative identity	Disturbances of core identity (basic self)
Common sense	Preserved common sense	Loss of common sense
Hallucinations	*No* hallucinations!	Fleeting hallucinations
Delusions	Paranoid ideation or dissociative symptoms during extreme stress	Fleeting delusions
Formal thought disorder	*No* formal thought disorder	Formal thought disorder
Self-disorders	*No* self-disorders	Self-disorders

Table 12.3 Psychopathological differences between BPD and bipolar disorder

	Borderline personality disorder	Bipolar disorder
Course	Trait-like	Episodic
Relationships	Severely disrupted	Not so severely disrupted
Interpersonal sensitivity	Hypersensitivity to rejection	Sensitivity to loss
Cognitive deficits	Less severe	More severe
Affective dysregulation	Between anger and depression	Between euphoria and depression
Cycling/affective changes	Very rapid affective changes	Less rapid mood cycling
Depression (see Sect. 9.2.2)	Chronic dysthymia; depression characterized by irritation and resentment	Core depression characterized by guilt and self-reproach
Suicidal behavior	Higher incidence of suicide attempts	Higher incidence of completed suicide
Psychomotor changes	No	Yes
Diurnal variation	No	Yes
Psychotic features	Paranoid or dissociative reaction to conflicts	Psychosis linked to affective state

Rosfort 2013; see Sect. 9.2.2). Borderlines in contrast to bipolars have high scores of impulsivity and hostility (Henry et al. 2001), and their lability is played out between euthymia and anger, whereas the bipolar mood changes between euthymia,

depression, and elation. So some researchers stress the similarities, others the differences. The reason for this controversy may be the fact that the diagnostic criteria of BPD (of both DSM and ICD) are rather nonspecific, the diagnosis, therefore, is remarkably heterogeneous, and that such conditions can be found in conjunction with many mental disorders (Stone 2005). Given the doubtful validity and reliability of BPD, much of the controversy seems to depend on how patients are selected and recognized.

Drug abuse may result in emotional instability mistaken for a borderline personality disorder. One patient was changing from day to day, sometimes being in good spirits and at other times tired and sad. Her mother noticed that she was always down on Mondays, and eventually it turned out that she was taking central stimulants on weekends. Traumatic brain damage can be followed by a personality change resembling borderline personality disorder (Gagnon et al. 2006). The close relation between the brain trauma and the personality change establishes the diagnosis.

Impulse control disorders are a group of syndromes characterized by impulsive acts, e.g., pyromania, kleptomania, and pathological gambling. In the strict sense, these are disorders characterized by *impulsions* rather than general impulsivity as in personality disorder. Impulsive acts may also be related to impulsive personality disorders, but they may also form part of schizophrenia, mood disorder, or organic brain disease. Impulsions are sudden acts brought about by a failure to control intrusive impulses, often in conflict with the person's underlying values. Impulsions are seen in psychoses, too, especially schizophrenia, as apparently incomprehensible acts (see also Sect. 5.1). Here is an example of loss of impulse control in an otherwise well-structured personality:

> A 40-year-old man describing himself as sensitive, self-insecure, conscientious and hard-working has had numerous bisexual sidekicks and has recently developed ludomania. He can't resist the impulses but the acts leave him with feelings of shame and regret.

12.5 The Differential Diagnosis Between Personality Disorder and Other Mental Illnesses

Hypomania, moderate degrees of mania, and disorganized schizophrenia may give an impression of a cluster B personality disorder of DSM-5. Depression may be mistaken for cluster C personality disorder. Closer inspection of the psychopathology and the course of illness should ensure the right diagnosis, but in doubtful cases the social history will usually reveal a later age of onset of the pathological process resulting in a change from a premorbid condition, inconsistent with a personality disorder. PTSD, especially after repeated traumatization, may be taken for borderline personality disorder due to symptoms like irritability, angry outbursts, and exaggerated startle responses arising within six months of the trauma (Kernberg and Yeomans 2013). Furthermore, PTSD is characterized by reliving the trauma through nightmares and flashbacks. The temporal relation between the traumatic events and the mental symptoms is decisive for the diagnosis.

The question of personality in chronic mental illness such as schizophrenia and dementia is precarious. In dementia there is a personality change rather than a personality disorder, manifesting itself, e.g., as disinhibition and emotional lability (see also Sect. 7.4.5). DSM-5, allowing ample comorbid diagnoses, also accepts personality disorder in schizophrenia, whereas ICD-10 does not allow this due to its hierarchal rules. On a theoretical level, the comorbidity does not make sense. Personality, and personality disorder, implies a consistent pattern of traits. In schizophrenia there is a loss of basic sense of self and dissolution of personality, at odds with personality disorder. In terms of personality traits, the pattern is more often contradictory, as illustrated by Kretschmer's *psychesthetic proportion*, the coexistence of hypersensitivity *and* insensitivity (Kretschmer 1925).

The differential diagnosis between personality disorder and other trait-like conditions, e.g., ADHD, schizotypy, and autism spectrum disorders, may sometimes cause diagnostic difficulty. ADHD, as opposed to personality disorder, is characterized by the absence of significant antisocial behavior from early childhood, the preserved capacity to establish in-depth friendships and loyalties, and the presence of normal identity integration in spite of irritability, depressive reactions, and explosive resentment when faced with the consequence of the cognitive disabilities (Kernberg and Yeomans 2013).

12.6 Temperament as Premorbid Traits of Mental Illness

Certain temperaments have been linked with major mental disorders. Kraepelin (1921) speaks of depressive, manic, irritable, and cyclothymic temperaments. The hyperthymic temperament, later to be associated with affective disorders, was included in Schneider's typology of "psychopathic" personalities (1923). The hyperthymic type is distinguished by being optimist, dynamic, and enterprising. Kretschmer (1925) outlines two temperaments appearing in the prepsychotic phase of circular (bipolar) and schizophrenic psychoses and in relatives of the patients: the *cycloid* and the *schizoid* temperaments.

The *cycloid* temperament, according to Kretschmer, is characterized by the following adjectives: (1) sociable, good natured, friendly, and genial; (2) cheerful, humorous, jolly, and hasty; and (3) quiet, calm, easily depressed, and soft hearted (ibid. p. 124). The relation between the hypomanic and melancholic elements of the cycloid personality is what he calls the diathetic or mood proportion. The sleek and uncomplicated nature of the cycloid temperament is contrasted to the schizoid temperament. The *schizoid* person (p. 146) has a surface that is brutal, dull and sulky, bitingly sarcastic, or timidly retiring. He enumerates three sets of peculiarities in schizoids described as (1) unsociable, quiet, reserved, serious (humorless), and eccentric; (2) timid, shy, with fine feelings, sensitive, nervous, excitable, and fond of nature and books; and (3) pliable, kindly, honest, indifferent, dull witted, and silent (p. 151). The psychesthetic proportion, the coexistence of hypersensitivity and insensitivity, is characteristic of the schizoid temperament. Kretschmer's schizotypy is closely related to the modern concept of schizotypy, not to be

confused with modern schizoid personality disorder (see Sect. 12.3). Kretschmer (1974) also designates a *sensitive type of character*, gentle, thin-skinned, spiritually differentiated personalities, liable to sensitive delusions of reference (*der sensitive Beziehungswahn*; see also self-reference in Sect. 8.4).

Phenomenological research in the premelancholic phase have portrayed a *typus melancholicus* (Tellenbach 1980), characterized by a fixation of orderliness and conscientiousness (see also Sect. 9.2.1). Perugi and Akiskal (2002) propose a *cyclothymic-anxious-sensitive temperament* behind their "soft bipolar spectrum" (see Sect. 11.1.5). The relation between chronic low-grade depression (dysthymia) and depressive personality is not yet settled (Shea and Hirschfeld 1996).

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Thinking Adult in Adolescent Psychiatry

13

Abstract

In this chapter we will briefly address aspects of adolescent psychiatry of special significance for adult psychiatry. Mental illness often makes its first appearance in the early years. Mental difficulties in childhood and adolescence predict adult mental difficulties. The early course of schizophrenia is characterized in most cases by premorbid personality disorder and a prodromal break of the functional curve. Self-disorders, considered specific of the schizophrenia spectrum, may be detected during adolescence. Disorganized schizophrenia has an earlier (adolescent) onset than the paranoid subtype. An important differential diagnosis of early symptom-poor schizophrenia is the autism spectrum disorders. Temperamental and behavioral traits in childhood and adolescence portend bipolar disorder. The early course of bipolar disorder is often neglected, and especially hypomania is misjudged or overlooked.

Mental illness has been associated with specific premorbid profiles in children and adolescents, either as premorbid temperaments predisposing to and predicting future illness or as subthreshold states of the very mental illnesses. Their value for early detection depends on the specificity of these characteristics. The ethics of early intervention also rests on this due to the risk of stigmatization and the unnecessary treatment of healthy individuals. This chapter will focus on means of detecting and differentiating between (adult) mental illnesses in adolescents.

The life history of adult psychiatric patients, including areas such as school achievement (premorbid cognitive functioning), socialization, and capacity for work, reflects the course of the mental illness. Breaks of the social trajectory give an impression of pathological deterioration. In children and adolescents, the social history is so much shorter, but the level of functioning and the breaks of the trajectory

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can still be detected. The evaluation is complicated by the fact that young people are synchronously developing both physically and mentally.

Childhood and adolescence difficulties predict adult difficulties. Premorbid difficulties presenting as personality disorder in adolescence elevate the risk for major mental illness and suicidal ideation in early adulthood (Johnson et al. 1999). Bullying, as bully or victim, is a predictor of mental symptoms, e.g., eating problems (Striegel-Moore et al. 2014), but the causal relation between the two is ambiguous; of course, bullying may lead to psychological reactions and contribute to the development of mental illness, but being an "easy victim" may also imply, e.g., deviance from the norms or loss of defensive power.

Like in adult psychiatry, symptom-poor or subthreshold cases are likely to be diagnosed on the basis of their most salient features or chief complaints rather than their fundamental psychopathological processes. Multiple diagnoses should, therefore, always arouse suspicion of such underlying psychopathological processes.

13.1 The Early Course of Schizophrenia

Premorbid peculiarities are detectable in the majority of schizophrenia cases. In the Copenhagen prospective study of high-risk offspring of schizophrenic mothers, behavioral abnormalities were assessed by psychiatrist and school teachers (Parnas and Jørgensen 1989). Affective dyscontrol in children with a mean age of 15 years, reflected in less introverted and more disturbed behavior, predicted schizophrenia as compared with schizotypy at follow-up 10 years later. The teachers reported of early patterns of behavior that showed certain gender differences: premorbid schizophrenia males had disciplinary problems, the females being more anhedonic, withdrawn, disengaged, and isolated, but poorly controlled (John et al. 1982).

Self-disorders (see Sect. 8.3) dating back to childhood or early adolescence are frequently reported by adult patients with schizophrenia (Nordgaard and Parnas 2014). Valid descriptions by the young patients of such subjective experiences cannot usually be obtained until adolescence. Self-disorders are prevalent among help-seeking, nonpsychotic adolescents (aged 14–18 years). They overlap with prodromal symptoms assessed by prodromal instruments but constitute a distinct dimension of risk of psychosis (Koren et al. 2013).

The symptoms of the early phases of childhood- and adolescence-onset schizophrenia are nonspecific, and it is difficult to separate the premorbid, prodromal, and psychotic phases (Stenstrøm 2011). Boys had earlier onset and higher incidence rates than girls, and prior to the schizophrenia diagnosis, significantly more girls had received diagnoses within the affective, nervous, stress-related, eating disorder and personality disorder categories, and more boys had received diagnoses within the drug abuse and developmental disorder categories. Self-disorders, showing themselves mostly as social withdrawal, were found in early schizophrenia (ibid.). Here is one example of early prodromal symptoms presented by the author:

> According to his parents Jeppe fell ill in the 8th grade coughing a lot. They considered whether he was ill or lazy. The X-ray was normal and the doctor said he was well. He later told that he didn't feel well, he was not himself, and his body felt unreal. (p. 96)

A birth cohort study indicates that the risk of being diagnosed with schizophrenia spectrum disorders is significantly increased after being diagnosed with any child and adolescent psychiatric disorder, particularly in the short term—within the first year (Maibing et al. 2015). The significance of these findings is debatable. Among these disorders we find autism spectrum disorders a fact which may, tautologically, be explicable by autistic traits inherent in schizophrenia spectrum disorders.

Psychotic symptoms dating back to childhood are frequently reported by adult patients, too. In many cases, these patients never told anybody about their experiences (hallucinations, persecutory ideas, etc.) thinking that these were normal experiences or, if they did, their parents or schoolteachers seem to have taken the phenomena as expressive of inner speech or a vivid imagination. Some adult patients refer to "my voice," the voice they have been hearing since childhood. In a prospective birth cohort study (Poulton et al. 2000), psychotic symptoms at age 11 predicted schizophreniform disorder at 26. This finding was replicated in another cohort study by Welham et al. (2009) showing that self-reported hallucinations at age 14 predicted non-affective psychosis at 21.

Kahn (1923) points out that in the majority of schizophrenia cases, a "break" (knick) in the development can be recognized: a radical change, something "new" taking place (p. 40)—as opposed to the insidious course of development in other cases. Such a break, indicative of a prodromal change, can be detected in intellectual, functional (school performance), and interpersonal (friendships) areas, in the form of affective changes and changes in interests (cf. existential change, see Sect. 8.5). Actually, in many cases we may observe two or more breaks in turn in different areas, e.g., social isolation followed by functional decline. But an apparent break in the functional curve may also be seen in poorly structured individuals as a direct consequence of moving from highly to less supportive living conditions. This phenomenon is often observed in young people "cracking up" when leaving primary school or leaving home and, conversely, often profiting from structured measures like doing military service and sharing an apartment. Yet another cause of breaking the curve may be undetected drug abuse.

Hebephrenia as a subtype of schizophrenia (DSM: disorganized type), emblematic of this diagnosis, is traditionally related to early, teenage onset, as reflected in the term (*Hebe* being the Greek goddess of youth). Hecker ([1871] Hecker and Kraam 2009a, b) assumes that hebephrenia emerges from the affective and bodily changes at the onset of puberty. "Body and soul stretch and expand in clumsy turns back and forth to adjust to the new feelings and ideas." All the characteristic aspects of self-dissolution (see Sect. 8.3) present in Hecker's description are viewed as derivative from these puberty changes: a strange confrontation of thoughts and feelings appearing in an unbalanced manner, seriousness along with silliness, tender sensations with coarseness, thought, speech, movement, and action missing precision. Schneider speaks of a pathoplastic impress of youth features indicating the

patient as a "gawk," "cheeky piece," etc. (1959, p. 91). Only at ages 18–19, a new consolidation is taking place as hebephrenia. However, this close relation to puberty was questioned as early as in 1892 by Daraszkiewicz (2005), finding many cases with onset into the twenties. The paranoid subtype of schizophrenia is generally associated with a later age of onset (during the 20s or even later).

Attempts have been made to identify prodromal patients by the aid of a symptom checklist. In a questionnaire-based survey of high-school students using the DSM-IIIR prodromal symptoms,[1] McGorry et al. (1995) found a high prevalence of these symptoms. They concluded that these features are extremely prevalent among older adolescents and unlikely to be specific for subsequent schizophrenia. In a study of nonpsychotic outpatients, Horneland et al. (2002) found a lower prevalence but a predictive value of the most "psychosis-specific" symptoms[2] from this list (15 % becoming psychotic within 6 months). See also Sect. 8.7.

Adolescence-onset schizophrenia is similar to adult-onset schizophrenia, but different from the very-early-onset type, the latter showing a higher rate of insidious onset, cognitive impairment, and poor outcome (Röpke and Eggers 2005; Schulz et al. 1998).

13.2 Schizophrenia Versus Autism Spectrum Disorders

For the general aspects of differential diagnosis between schizophrenia and autism spectrum disorders, see Sect. 8.9. The differential diagnosis of autism spectrum disorder and fulminant positive-symptom schizophrenia is easy. When it comes to more symptom-poor varieties of schizophrenia spectrum disorders such as schizotypy and simple schizophrenia, the difference is much more uncertain (Nylander et al. 2008). There seems to be a tendency for child-adolescent psychiatrists to be more focused on the autism spectrum and adult psychiatrists on the schizophrenia spectrum, a circumstance impeding the exploration of the differential diagnosis. We often meet adult patients with beginning schizophrenia who have been diagnosed with childhood autism years before.

Comparing childhood schizophrenia with autism, Rutter (1972) lists a number of differences. First of all, he emphasizes that autism is a developmental disorder. The autist does not withdraw or retreat from the world, but rather fails to develop social relationships, and he has a deficiency of fantasy rather than an excess, in contrast to young patients with schizophrenia. His distinction is, however, closely related to Bleuler's concept of autism (a withdrawal into fantasy) that does not apply to all schizophrenia cases, but is more likely expressive of a secondary retraction, e.g., due to social anxiety (secondary autism). Even the schizophrenic-type autism can often be traced back to early childhood, and these patients do not always "withdraw."

[1] Magical ideation; unusual perceptual experiences; social isolation/withdrawal; markedly impaired role function; blunted, flat, or inappropriate affect; digressive or overelaborate speech; marked lack of initiative or energy; markedly peculiar behavior; and marked impairment in personal hygiene.

[2] Peculiar behavior, magical thinking, and unusual perceptual experiences.

Self-disorders, demonstrable in adolescents, are considered specific for schizophrenia spectrum disorders. Delusions and hallucinations are rare in childhood autism and remain rare even after the children have reached adulthood, but this applies even to symptom-poor schizophrenia. Mental retardation often accompanies autism and shows a characteristic pattern of IQ subtest scores: high on visuospatial tasks and low on language skills. Organic factors such as perinatal complications and epilepsy (not necessarily of the temporal lobe type) are more common in autism. Still, these factors are not sufficient to ensure the right diagnosis which may be quite troublesome (see also Sect. 8.9).

13.3 The Early Course of Affective Disorders

The prevalence of teenage depression is estimated to be about 5.6 %, a little higher in girls than in boys (Costello et al. 2006). In teenagers, the diagnosis appears to be beset with difficulties. The diagnosis is accompanied by a high rate of comorbid diagnoses of all sorts—anxiety, substance abuse, etc. (Rohde et al. 1991)—which may indicate the nonspecificity of the depression diagnosis in these cases, the depressive symptoms probably rather being expressive of the severity of illness, and suffering in relation to the so-called comorbid diagnosis. Recurrent depressions in adolescents frequently convert to bipolar spectrum disorders (estimated through hypomanic symptoms; Smith et al. (2005)).

The topic of premorbid traits portending bipolar disorder is rarely addressed (Goodwin and Jamison 2007, p. 332). Early studies have identified certain traits in high-risk children: aggressiveness, extroversion, introversion, impulsiveness, and sensation seeking. Dysthymic, irritable, and cyclothymic temperaments prevail in the bipolar spectrum (Akiskal 1994). There are few prospective studies, and the premorbid characteristics are often reported in general, non-sophisticated terms, like the five-factor model, and rarely as traits more relevant for the affective field, e.g., those of *typus melancholicus* reported in unipolar depression and bipolar II (Hecht et al. 1997; Kronmüller et al. 2005; see also Chap. 12).

Bipolar affective disorder appears to develop during the teenage years. Mania-like symptoms, found in a group of 14–16-year-olds, appear to be related to higher rates of attention deficit, conduct disorder, anxiety disorders, and psychotic symptoms (delusions and hallucinations), but the nosological implications of these findings are uncertain (Carlson and Kashani 1988). First symptom of mental illness in bipolars is found to be experienced at median age 17.5 and mood swings at age 18.0 (Berk et al. 2007). In high-risk offspring, the mean age of onset of the first manic or hypomanic episode is found to be as low as 13.4 years (Axelson et al. 2015). However, there are many circumstances complicating the differential diagnosis in young people (Carlson 2012), and it is wise to make the diagnosis of bipolar disorder provisionally. One question is whether expansive behavior is expressive of hypomania or should be explained as a teenage reaction or reflects a preexisting hyperthymic temperament. Youth borderline personality traits seem to predict poor outcome in bipolar disorder (Yen et al. 2015), but the borderline traits themselves

(impulsivity, mood swings) may be interpreted as bipolar symptoms (Ghaemi and Barroilhet 2015). Drug abuse, often kept hidden for the parents, may also account for phasic mood swings.

Thase (2006) enumerates factors of importance for the differential diagnosis. The majority of patients with early-onset bipolar disorder are misdiagnosed in the initial episode. Bipolarity is not recognized in an initial depressive episode, a florid manic episode may be confused with an acute schizophrenic episode, and many aspects of hypomania are viewed as a healthy or desirable state. Irritability, aggressively, and impulsivity, endemic in young psychiatric patients, acquire more bipolar specificity when appearing episodically. Atypical or reversed neurovegetative features (such as increased appetite, weight gain, and hypersomnia) in depressed youth are associated with greater likelihood of bipolarity.

13.4 Anxiety Disorders

Adolescents with anxiety disorders are at an increased risk of subsequent anxiety, depression, drug dependence, and educational underachievement as young adults (Woodward and Fergusson 2001). Thus, anxiety appears here to be an early, nonspecific marker of incipient psychopathology.

The age of onset of OCD predicts the psychopathological course into adulthood. Distinguishing between early-onset (before age 10) and late-onset (after age 17) OCD, Rosário-Campos et al. (2001) demonstrate more severe OC phenomena and more tic-like and sensory phenomena in the early-onset group. The sensory phenomena comprise tactile, motor, and "mental" sensations (urges) before or during the acts (Miguel et al. 2000). The differential diagnosis between OCD and Tourette's syndrome seems more difficult in the early-onset group. For the differences between compulsions and tics, see Chap. 4 and Sect. 7.4.4.

13.5 Personality Disorder and Adolescence

Personality disorder (PD) in childhood and adolescence is a particularly delicate matter. Developmental and reactive circumstances are still playing parts in the formation of personality, and caution is, therefore, warranted in establishing PD diagnoses. Although personality disorders by definition begin early in life ("in childhood or adolescence," DSM-III, p. 306; "can be traced back at least to adolescence or early adulthood," DSM-5, p. 647), versions of DSM prior to DSM-IV do not allow making PD diagnoses except "in those unusual instances in which the particular maladaptive personality traits appear to be stable" (DSM-III, p. 306). Instead, they refer to special childhood disorders, e.g., conduct disorder. DSM-5 allows a little more liberal PD to "be applied with children or adolescents in those relatively unusual instances in which the individual's particular maladaptive personality traits appear to be pervasive, persistent, and unlikely to be limited to a particular developmental stage or another mental disorder" (p. 647).

Adolescent conduct disorder, rather than ADHD or oppositional defiant disorder, predicts—almost tautologically—adult antisocial personality disorder. The best predictors are callous/unemotional behavior, depression, and marijuana use (Loeber et al. 2002). The nosological status of borderline personality disorder is controversial: it is conceived as a severe personality disorder by the diagnostic systems (DSM, ICD) and as a subaffective disorder by many clinicians and researchers (see also Sect. 9.2.5). There is at least some evidence from child psychiatry of a relation between this disorder and childhood physical and sexual abuse and neglect (Widom et al. 2009), indicating an environmental influence. However, the causal relation is rather complex.

13.6 Attention Deficit Hyperactivity Disorder

ADHD and ADD have established themselves as some of the most prominent child and adolescent diagnoses, at first in the US and later in other parts of the world as well. They are widely used to designate almost any state characterized by inattention and restlessness. In the narrow sense, they refer to trait-like conditions with early childhood onset and without antisocial personality traits. Applying strict diagnostic criteria, it can be demonstrated that ADHD is overdiagnosed in children and adolescents as compared with bipolar disorder and major depressive disorder (Chilakamarri et al. 2011). Childhood and adolescent ADHD predicts adult difficulties. At 10-year follow-up, patients later diagnosed with ADHD were in great risk of getting antisocial, addictive, mood, and anxiety diagnoses (Biederman et al. 2006). Premorbid schizophrenia may have certain points of resemblance to ADHD: disciplinary problems, loss of control, poor concentration, etc. (see above). ADHD may continue into adulthood (Faraone et al. 2000), and the clinical picture here is very similar to the childhood and adolescent equivalents. However, adult patients may be better at controlling their restlessness.

13.7 The Effects of Substance Use/Abuse

Among children and adolescents, daily cigarette smoking, weekly alcohol consumption, and any illicit substance use in the past year are associated with an elevated likelihood of psychiatric disorders (anxiety, mood, or disruptive behavior disorders) (Kandel et al. 1997). Possible explanations include underlying characteristics that predispose to both anxiety and depression, self-medication, and adverse effects of cannabis. Daily and weekly cannabis use in female teenagers predicts higher odds of later depression and anxiety (Patton et al. 2002). Using cannabis in adolescence increases the likelihood of experiencing symptoms of schizophrenia in adulthood (Arseneault et al. 2002). Cannabis use appears to increase the risk of schizophrenia and other psychotic outcomes (Moore et al. 2007; Hall and Degenhardt 2008). Self-medication with cannabis, though widespread, does not explain these findings. There is also evidence that regular cannabis users with psychoses have

more positive symptoms, more frequent relapses, and require more hospitalization (Hall and Degenhardt 2008).

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Concluding Chapter: The Diagnostic Process

14

In this chapter we will outline the interview for differential diagnosis in the context of the diagnostic process. The diagnosis cannot be made validly in "cross section," e.g., from symptoms at admission, but should always imply a full, chronological lifetime examination of psychopathology. "Present state examination," limited to, say, 1 month, is insufficient for identifying the affinity of a syndrome with a diagnostic spectrum. As for conducting the interview, see the advice in Sect. 4.6. Here is a proposal for the stepwise structure of the diagnostic process:

1. The natural point of departure is the identification of the *key problem*(*s*) expressed by the patient, either on a lifetime basis or as the presenting complaint at admission. Very often such information proves of great value for understanding the patient's global mental problems and his/her motivation for seeking help.
2. *The chronological life history*, which should not just be a listing of biographical facts (like the one performed by social workers), but a joint search for existential patterns of importance for the differential diagnosis as well as contextual factors, reaction modes, coping mechanisms, etc. The chronological approach also serves to disclose "silent" periods of life (e.g., due to social isolation and unemployment), which would otherwise be ignored. It is important to identify:
   (a) Patterns of social relations: friends and lovers/spouses, their closeness, common interests and the stability of their relationship, the patient's sexual orientation, and contact with relatives and colleagues. These patterns also reflect the premorbid personality, social withdrawal, belligerence, sensitivity, impulsivity, and many other facts.
   (b) Social stability: housing, education, jobs, finances, and periods of unemployment. Instability may reflect impulsivity or disorganization.
   (c) The highest academic level expressed in grading, level of education, intellectual interests, etc., reflects the level of intelligence.

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(d) Functioning estimated from basic skills (grooming, cleanliness, cooking, etc.) and professional skills. The loss of basic functioning may reflect the emergence of negative symptoms in the course of prodromal changes, incipient dementia, or state-like loss of energy and psychomotor inhibition in depression.
(e) Leisure-time activities and interests: social or solitary. Types of interests: theoretical, religious, technical, athletic, odd, etc. These may reflect introversion/extroversion, hyperreflectivity, level of activity and enterprise, etc.
(f) Breaks of the functional curve ("Knick," cf. Sect. 13.1). Breaks not adequately accounted for by external stressors or changes in living conditions could be the work of prodromal pathology. However, extreme caution should be taken in interpreting earlier events as *causal factors* for mental disorders on account of the danger of rationalization after the fact (cf. the principle of charity, Sect. 6.7).
(g) Existential change (cf. Sect. 8.5), such as suddenly taking interest in philosophy or religious ideas, possibly expressive of a prodromal change.

3. The knowledge obtained by going through a systematic life history may form the background for exploring key episodes and critical stages for psychopathology (as outlined in Sect. 4.6). Psychopathological instruments may be used as checklists to help the interviewer keep the overview, but never as a structured interview guide. Psychopathology should be evaluated in the context of the specific phase of illness. It is important to explore the phasic changes of psychopathology together with the patient. Psychopathological instruments do not always allow that kind of distinction.
4. The chronological approach allows an estimate of the *course of illness*: trait vs. state, premorbid and prodromal phases, active phases, continuous vs. episodic course, decline of functioning, and residual phases. Even in the absence of psychopathological information, it may reveal a special existential pattern rendering a specific diagnosis probable (probabilistic or actuary diagnosis, see Sect. 6.4), but attempts should always be made to verify such probabilistic hypotheses.
5. It is important to question the patient about his/her *medical history*, especially illnesses affecting the CNS, and about alcohol and use/abuse of psychoactive drugs. Does the patient use drugs as self-medication? How is the relation between drug use and psychopathology? In case a drug-induced psychosis is suspected, it is important to look for examples of psychopathology before the onset of the drug abuse and during long drug-free intervals.
6. During the interview we should simultaneously observe the patient's facial expressions, language, emotional rapport, etc., as part of the mental state examination (Chap. 5). In hospital, this is supplemented by observation in the ward of contact with the staff and fellow patients, functional skills, sleep patterns, and so on.
7. Sometimes the patient's diary entries, letters, or drawings, discussed with him or her, may contribute valuable details to the psychopathological phenomena and the chronological course of illness.

8. The diagnostic interview should be complemented by case records from previous admissions or outpatient treatment, conversations with relatives, psychological testing, physical examination, and paraclinical tests. The patient's mother can usually contribute important information about pregnancy and circumstances at birth, early illness, developmental disorders, childcare adjustment, and the like, often not available from the patient. Additionally, the parents can provide information about the family history of mental illness (in case the patient does not know about it) and offer their view of the course of illness that often differs from the patient's view (expressive vs. subjective aspects of psychopathology).
9. The diagnosis is made prototypically in the light of all available information, at least as a spectrum diagnosis (e.g., a schizophrenia spectrum disorder). The total psychopathological picture and the specific quality of the single phenomena must be estimated in their specific context.
10. Only at this point, the DSM or ICD diagnosis should be made, following the diagnostic algorithm. Exhaustive knowledge of psychopathological phenomena is prerequisite for the correct use of the diagnostic criteria. Multiple diagnoses should always cause suspicion of a common underlying psychopathological process better explained by a single diagnosis. DSM comorbid diagnoses are meant for describing psychopathological aspects, not (necessarily) separate disease entities.

A stepwise diagnostic process like this should never be regarded as a firmly structured procedure but rather as a checklist of important elements of the conversational interplay with the patient, without which the process will inevitably turn into a barren data collection missing the crucial part, estimating the psychopathological foundation for a valid diagnosis.

The diagnostic process has a multifarious purpose: to uncover the underlying psychopathological structure for the right treatment approach, to map the mental and functional resources and problem areas for training and rehabilitation, to make an official diagnosis for registration and referral to hospital services, etc. Dependent on the specific purpose, it may be necessary to expand certain parts of the process at the expense of others, but at any rate a valid diagnosis hangs on the quality of the interview for differential diagnosis.

Index

A
Acoasms, 146
Active negativism, 63
Actuary diagnosis, 258
Acute dystonia, 67
Acute non-organic psychoses, 28, 221–223
Acute schizophrenia, 6, 223–226
ADHD. *See* Attention deficit–hyperactivity disorder (ADHD)
Affective disorders, early course, 251–252
Affective spectrum, 97, 169, 241
Affects, 40, 53, 63, 69, 73–74, 162, 171, 201, 235
Agitated depression, 185, 210, 214
Agitation, 2, 4, 58, 60, 64, 66, 67, 73, 105, 112, 172, 175, 177, 180, 183, 185, 186, 210, 211, 213
Agony, 99, 105, 174, 186, 192, 195
Akathisia, 60, 67
Akinesia, 62
Alcoholic hallucinosis, 116
Alice in Wonderland syndrome, 206
Alogia, 76, 137
Aloof, 69, 70
Alternative psychosis, 115
Ambitendency, 62, 63
Ambivalence, 28, 46, 47, 57, 63, 105, 137, 138, 139, 179, 236
Anergic dysthymia, 185
Anesthesia dolorosa, 4
Anhedonia, 72, 137, 171, 172, 177–179, 185, 225
Anomia, 75, 111
Antagonomia, 161
Antipsychotic medication, 3, 67–68, 87
Anwesenheit, 136, 141, 143
Anxiety as mood, 192–194
Anxiety, organic, 117–119
Anxious dysthymia, 185
Apophany, 148
Apraxia, 58–60, 121
Arc de cercle, 122
ARMS. *See* At-risk-mental-states (ARMS)
Arson, 57
'As if' experiences, 141
Asperger's disorder, 98, 157
Assumed mutual knowledge, 78, 82
Athetoid, 68
At-risk-mental-states (ARMS), 155, 224
Attention, 4, 19, 23, 54–56, 74, 84, 85, 104, 111, 112, 120, 131, 135, 142, 156, 171, 178, 195, 196, 203, 211, 215, 235, 237, 251
Attention deficit–hyperactivity disorder (ADHD), 2, 4, 19, 60, 84, 94, 105, 120, 244, 253
Attenuated psychosis syndrome, 156, 159
Attire, 55
Atypical features of depression, 182
Audible thoughts, 22, 136, 140
Autism, 3, 71, 96, 103, 131, 138, 139, 147, 156, 157, 158, 160, 177, 179, 223–225, 244, 249–251
Autism spectrum disorders, 98, 151, 157, 204, 244, 249–251
Autistic logic, 77, 78, 82
Autistic-solipsistic delusions, 135, 147, 218
Automatic obedience, 62, 63
Automatism, 59, 61, 64, 122, 195, 203
Autoscopy, 115

B
Basic mood, 96, 97, 192, 210, 241
Basic self, 140, 172, 174, 184, 196, 232, 240, 242
Basic sense of self, 140, 181, 244
BDD. *See* Body dysmorphic disorder (BDD)

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L. Jansson, J. Nordgaard, *The Psychiatric Interview for Differential Diagnosis*,
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Benommenheit, 58, 59, 121, 173
Bipolar depression, 4, 117, 175, 178, 182, 185, 220, 221
Bipolar 'soft signs,' 220
Bipolar spectrum, 210, 219–220, 251
Bizarre behavior, 55–57, 130
Bizarre concreteness, 77, 80
Bizarre delusions, 132–137, 216, 224, 225
Bizarre suicides, 87
BLIPS. *See* Brief limited intermittent psychotic episodes (BLIPS)
Bodily illusions, 146, 151
Body dysmorphic disorder (BDD), 196, 204, 206
Bonn scale for the assessment of basic symptoms (BSABS), 141
Borderline depression, 180, 241
Borderline personality disorder (BPD), 4, 19, 57, 73, 105, 142, 180, 182, 219, 224, 233, 234, 237–243, 253
Borderline personality disorder *vs.* bipolar disorder, 219, 242
Bouffées délirantes, 222
Breaks of the functional curve, 258
Breaks of the social trajectory, 247
Brief limited intermittent psychotic episodes (BLIPS), 155, 224
BSABS. *See* Bonn scale for the assessment of basic symptoms (BSABS)
Bullying, 248

C

Capgras delusion, 114
Capgras syndrome, 156
Caseness, 104
Catalepsy, 62, 65, 123, 138
Catatonia, 3, 61–66, 87, 115, 123, 130, 131, 137, 138, 156, 162, 185, 218, 225, 226
Catatonic excitement, 65, 138, 218
Catatonic stupor, 59, 62, 121, 185
Categorization, 18, 33, 54, 99
Cenesthesias, 146, 154, 194
Cenesthopathic schizophrenia, 154
Character, 61, 78, 86, 94, 110, 131, 133, 139, 140, 143, 170, 172, 175, 179, 183, 185, 197, 200, 201, 215, 218, 219, 222, 232, 234, 235, 241
Charles Bonnet syndrome, 110, 146
Choreiform, 68
Chrematic, 177, 178
Circumstantiality, 78, 83
Clanging, 78, 84
Clouding of consciousness, 85, 121, 122, 222
Cluster A B C, 4, 104, 234, 243
Cognitive dysfunction, 111, 114, 120
The cognitive interview, 2
Cognitive slippage, 78, 82
Cohen's kappa, 13
Coherence theory, 10, 12
Commenting voices, 105, 133, 137
Common sense, loss of, 70, 82, 121, 130, 139, 142, 145, 152, 158, 161, 177, 179, 195, 197, 203, 242
Comorbidity, 1, 96, 101–103, 182, 192, 196, 241, 244
Compulsion, 3, 57, 64, 66–67, 117–119, 143, 144, 197, 198, 199, 201, 202, 203, 205, 215, 235, 236, 252
Concretism, 77, 78, 80, 161
Concurrent validity, 10, 11, 13
Confabulation, 84, 85, 120
Consciousness, 21–23, 32, 37, 39, 47, 48, 61–64, 79, 84–86, 111, 114, 116, 121, 122, 176, 198, 199, 201, 212, 222–224
Construct validity, 10, 11
Contagious mood, 72
Content validity, 10, 11
Context, 2, 4, 12, 20–22, 28, 30, 32–34, 39, 41–45, 54, 71, 94–96, 98, 99, 104, 110, 130, 131, 133, 137, 139, 146, 148, 173, 192, 233, 236, 238, 257, 258, 259
Context-fitting questions, 41
Conversational interview, 33, 35, 41
Core depression, 4, 59, 63, 97, 153, 170, 180, 183, 242
CORE measure, 185
Core-self, 140
Corporealization, 147, 177
Correspondence theory, 10
Cotard's syndrome, 134, 147, 177, 205
Course and clinical variation of the schizophrenia, 149–154
Course of bipolar disorder, 220–221
Course of depression, 184–185
Course of illness, 12, 94, 100, 112, 182, 210, 215, 219, 223, 258, 259
Course of schizophrenia, episodic, 225
Crampus transcendentalis, 212
Crazy acts, 56, 141, 145, 161
Criterion validity, 10, 11
Cycloid psychoses, 121, 222
Cycloid temperament, 244
Cyclothymic-anxious-sensitive temperament, 245
Cyclothymic temperament, 241, 244, 251

D
de Clérambault's syndrome, 156
Decrease of affect, 73, 74, 162
Dedifferentiation, 77, 78, 80, 83
Delirious mania, 212
Delirium, 60, 73, 85, 111, 112, 116, 117, 121, 122, 130, 139, 161, 210, 219, 226
Delirium acutum, 122
Delusion, 22, 39, 46, 48, 86, 87, 104, 112–114, 130–137, 140, 143, 147, 148, 154, 156, 158, 173, 175–179, 182–184, 197, 199, 201, 202, 205, 206, 212, 213, 214, 215, 216, 218, 222, 224, 225, 236, 242, 245, 251
Delusional atmosphere. *See* Delusional mood
Delusional hypochondriasis, 156, 205
Delusional jealousy, 116
Delusional mania, 212
Delusional mood, 97, 134, 135, 141, 142, 147–149, 192, 193
Delusional perception, 105, 132, 134, 135, 142, 147–149
Delusional psychosis, 219, 236
Delusions of reference, 130, 143, 222, 245
Dementia
  frontotemporal, 111
  praecox, 95
Demoralization syndrome, 181
Depersonalization, 28, 105, 123, 141, 147, 149, 151, 154, 177, 178, 179, 194, 199, 206, 224, 239
Depressed mood, 28, 72, 170, 171, 173, 177, 178, 180
Depression
  cross-cultural aspects, 183
  organic, 174
  of the psychic ground, 175
  psychotic, 97, 170, 183–184, 225
  in schizophrenia, 181–182
Depressive autism, 177, 179
Depressive mood, 4, 31, 59, 121, 153, 170–172, 174, 175, 178, 179, 182, 184, 200, 225
Depressive rumination, 177, 192
Depressive stupor, 62, 138, 185
Derailment, 77–79, 132, 161, 203
Derealization
  global, 146
  intrusive, 147, 148
Derogative voices, 133
Descriptive study, 23
Despair, 176–179, 192
Desynchronization, 176
Diagnostic criteria
  of depression, 170–174
  of schizophrenia, 131–138
Diagnostic overlap, 101–103
Diagnostic spectra, 3, 95–98, 129, 134, 135, 147, 195
Differential diagnosis, 1–5, 33, 53, 55, 94–96, 101, 103, 110, 111, 113, 115, 122, 123, 130, 137, 138, 141, 152, 153, 156–158, 161, 182, 198, 203, 214–220, 223, 238, 240, 241, 243–244, 250–252, 257, 259
Discussing voices, 137
Disorder of affectivity, 160, 162
Disorders of self-awareness. *See* Self-disorders
Disorganized schizophrenia, 72, 101, 130, 147, 241–243
Dissimulating, 45, 56
Dissociative depersonalization, 147
Dissociative hallucinations, 160
Distractibility, 84, 111, 211, 213, 217
Double bookkeeping. *See* Double orientation
Double orientation, 111, 131, 135, 140, 202, 218
Doubting disease, 198
Drug-induced Parkinsonism, 67
DSM-5, 2, 3, 5, 31, 58, 95, 98, 99, 103, 105, 111, 116, 119, 122, 130, 131, 132, 133, 134, 136, 138, 142, 144, 146, 150–152, 156, 157, 159, 161, 170–174, 177, 178, 180–183, 185, 194, 195, 198, 199, 201, 202, 204–206, 210–214, 218, 219, 221, 223, 224, 225, 232–241, 243, 244, 252
Dysesthetic crises, 194
Dysmorphophobia, 103, 144, 204–206
Dysphoria, 72, 73, 171, 180, 184, 192, 240
Dysthymia, 97, 103, 175, 180, 182, 184, 185, 242, 245

E
Early detection of schizophrenia, 154–156
EASE. *See* Examination of Anomalous Self-Experiences (EASE)
Echolalia, 62, 66, 204
Echopraxia, 58, 59, 60, 66
Ecstasy, 72
Eidetic variation, 23, 24
Eidolia, 110
Élan vital, 176
Elective mutism, 64
Elevated mood, 72, 210, 211
Emergency room, 43, 45, 55, 57, 130
Emotionally unstable personality disorder, 234, 238

Empathic understanding, 23, 135
Empathy, 2, 23, 40, 42, 212
Empirical delusions, 135
Encephalitis lethargica, 118, 119
Endogenomorphic depression, 178
Endogenous juvenile-asthenic failure-syndrome, 123, 154
Endogenous obsessive-compulsive disorder, 144, 154, 200
Epileptic psychoses, 114, 115
Epoché, 23, 24
Erotomania, 156
Erythrophobia, 196
Essential properties, 148
Euphoric mood, 72
Evasive glance, 69
Evolutive schizoidia, 153
Examination of Anomalous Self-Experiences (EASE), 106, 141, 148
Existential change, 100, 133, 148, 249, 258
Existential orientation, 100
Existential patterns, 99–101, 257
Expansive mood, 211, 218
Experienced time, 176, 179
Experiential modalities, difficulty differentiating between, 146
Explicit rationality, 130
Expressive language, 74, 75
Extended suicide, 86
Extracampine hallucinations, 133, 136
Extrapyramidal side effects, 3, 59, 67–68, 114

F
Factitious disorder, 122, 123
Fantastic melancholia, 183
Fear of bodily contact, 145, 195
First-person perspective, loss of, 140, 147, 237
First prodromal break, 100
First-rank symptom continua, 149
First-rank symptoms (FRS), 94, 104, 105, 130, 133–137, 140, 141, 145, 147, 149, 153, 154, 158, 170, 184, 213, 216, 224, 225
Flight of ideas, 54, 72, 75, 76, 80, 117, 161, 211, 213, 216–218
Folie à deux, 133, 233
Forced grasping, 62, 63
Forced normalization, 115
Formal thought disorders, 3, 43, 54, 65, 70, 74, 76–84, 116, 122, 138, 150, 153, 156, 158, 160, 161, 218, 241, 242
Frame problem, 33
Framework, 17, 22, 32, 40, 43, 78, 79, 131
Fregoli syndrome, 156
Frontal cortex injury, 110
Frontal lobe syndromes, 117
FRS. *See* First-rank symptoms (FRS)
Fugue, 61, 123
Functioning, 43, 44, 55, 61, 74, 104, 105, 121, 139, 155, 157, 159, 221, 222, 224, 232, 233, 235, 247, 258
Fundamental symptoms of schizophrenia, 3, 131, 138, 149, 150, 152, 215

G
Gait, 58, 59, 67, 183
Ganser syndrome, 121
Gebundenheit, 58–60, 66
Gegenhalten, 62, 63
Generative disorder, 96, 139, 156, 175
Geschwind syndrome, 120
Gestalt, 2, 18–20, 54, 71, 97–100, 103, 130, 131, 138–141, 152, 155, 222
Gimlet eye, 68, 69
Grandiosity, 99, 105, 117, 130, 140, 144, 196, 210, 212, 213, 215, 217–219
Grimacing, 59, 62, 64–66
Grooming, 55, 155, 258
Gross failure to achieve, 55, 58
Guarded, 18, 45–46, 55, 56, 69, 70, 75, 212
Guilt, 99, 172–180, 182, 183, 199, 211, 238, 242
Gullible-suspicious paradox, 70, 196

H
Hallucination modalities, 110
Hallucinations
  in depression, 183
  in schizophrenia, 110, 132, 133, 148
  unformed, 116, 141, 146
Hamilton depression scale, 174
Haptic hallucination, 111, 116
Hebephrenia, 64, 72, 147, 150, 152, 153, 181, 249, 250
Hebephrenic schizophrenia, 152, 241, 252
Heboidophrenia, 150, 241
Hereditary suicide, 87
Hoarding, 54, 55, 58, 119, 198, 199, 204
Hopelessness, 32, 86, 176, 178
Hostile, 18, 45, 46, 48, 56, 60, 70, 196
Hyperactivity, 58, 60, 72, 221, 253
Hypergraphia, 117
Hyperkinetic states, 59, 62, 65

Hyperreflectivity, 28, 139, 197, 258
Hyperthymic temperament, 213, 219, 220, 244, 251
Hypoactive delirium, 122
Hypochondriasis, 144, 156, 183, 205–206
Hypohedonia, 172, 182
Hypokinesia, 58, 60
Hypomania, 4, 72, 117, 210, 212, 213, 219, 220, 243, 251, 252
Hypomimia, 58–60, 162, 173
Hysterical style, 237

I
Ideal type, 94
Ideational perseveration, 77, 78, 81, 83, 111
Illusions, 103, 141, 146, 151, 155
Implicit rationality, 56, 130
Impulse control disorders, 243
Impulsions, 55, 57, 86, 243
Impulsive acts, 55, 57, 238, 242, 243
Impulsive personalities, 237–243
Inadequate, 54, 56, 70, 99, 182, 241
Inappropriate behavior, 55, 56
Includence, 176
Incoherence, 54, 77, 79, 80, 132, 161, 216, 217
Incoherence in mania, 33
Incongruent affects, 73
Increased psychomotor pace, 58, 60
Initial prodromal depression, 181
Inner, 20–22, 54, 60, 63, 64, 67, 71, 79, 105, 130, 137, 139, 149, 151, 170, 171, 176, 183, 206, 232, 233, 240, 249
Insecurity, 43, 70, 161, 185, 193, 200
Insight, 22, 28, 29, 115, 119, 131, 140, 144, 160, 201, 202, 206
Intelligence, 11, 70, 84, 85, 101, 121, 135, 257
Interview schedule, 18, 30, 31, 37
Intuitive diagnosis, 70
Inventiveness, 216, 218
Irritable mood, 210, 211
Iterations, 59, 61, 66

J
Jactationen, 60
Just right, 118, 198, 203

K
Kinsey, A., 41, 42
Knick, 100, 249, 258

L
La belle indifférence, 122
Larvate depression. *See* Masked depression
Latency, 59, 60, 75, 99, 172, 221
Late paraphrenia, 156
Life-forms, 99
Life history, 74, 94, 95, 99–101, 119, 130, 234, 242, 247, 257, 258
Life-time examination, 257
Lived time, 176
Logoclonia, 75
Logorrhoea, 75
Loss of feelings, 147, 172, 177

M
Magical experiences, 144, 201
Magical thinking, 22, 141, 144, 151, 155, 201, 250
Major depression, 39, 63, 110, 127, 170, 175, 180
Major neurocognitive disorder, 111
Major self-mutilation, 88
Maladaptive affects, 73
Malignant catatonia, 115, 123
Malignant hyperthermia, 123
Malingering, 122, 123, 159
Mania, 40, 47, 49, 54, 60, 65, 72, 79, 84, 96, 99, 105, 117, 122, 137, 146, 161, 175, 181, 196, 210–221, 243, 251
  severity stages, 212
Manic delusions, 214
Manic-depressive illness, 95, 169, 210, 218
Manic excitement, 218
Manic hallucinations, 212
Manic mood, 4, 72, 117, 184, 211, 214–16
Manic prodrome, 221
Manic type, 219
Maniform delirium, 117, 219
Maniform psychosis, organic, 215, 218, 219
Mannerism, 62, 64, 65, 68
Manneristic, 56, 64, 87
Masked depression, 97, 182
Melancholia, 61, 86, 96, 134, 147, 170, 172–181, 183, 185, 196, 199, 205, 233
Melancholic depersonalization, 147, 177
Memory, 84, 85, 111, 120, 121, 135, 146, 157, 160
Mental State Examination, 53–88, 241, 258
Metonymies, 77, 78, 81
Metonymy, 161
Micropsychosis, 146
Mineness, 147

Misidentification syndromes, 114, 156
Mistrustful, 70
Mitgehen, 62, 63
Mitmachen, 62, 64
Mixed states, 4, 185, 210–221
Mood
  and affect, comparison, 73, 171, 241
  basic, 73, 96, 97, 192, 210, 241
Mood-congruent psychotic features, 183
Mood-incongruent psychotic features, 183, 213
Moral pain, 72, 171, 192
Morbid geometrism, 141, 145, 203
Morbid rationalism, 55, 57, 139
Morbid regrets, 174, 179, 184
Morphological body change, 206
Motor interference, 203
Motor perseveration, 62, 66
Muddled speech, 77, 79
Multiple diagnoses, 102, 103, 105, 248, 259
Mutism, 62, 64, 138

N
Narrative self, 140, 232, 240
Natural attitude, 23, 131
Natural self-evidence, loss of, 139
Near-psychotic phenomena, 3, 104, 141–147, 150, 158, 200, 204
Negative symptoms, 54, 95, 101, 105, 114, 131, 132, 137, 138, 152, 153, 161, 162, 181, 185, 195, 204, 216, 225, 258
Negative symptoms, secondary, 114
Negativism, 62, 63, 137
Neologism, 78–80, 83, 132, 161
Neophobia, 158, 194
Neuroleptic malignant syndrome, 115, 123
Neurological signs in dementia, 112
Neurological soft signs, 110, 121
Neurosyphilis, 112, 117, 215, 219
Neurotic styles, 142, 235
Night terror, 194
Nihilism, 99, 177, 183
Nonspecificity of psychopathology, 136
Normality, 103–105, 158, 159, 175, 213
Nosological, 1, 2, 31, 40, 79, 94, 102, 116, 122, 138, 156, 174, 202, 204, 206, 221, 251, 253
Nosophobia, 205
Nuclear depression, 175–178, 185

O
Obsession, 35, 54, 64, 66, 118, 119, 143, 144, 179, 183, 197–204, 236
Obsession in depression, 199, 200
Obsessive-compulsive-like phenomena, organic, 117, 204
Obsessive-compulsive disorder, 60, 98, 144, 154, 197–201, 204
Obsessive-compulsive phenomena, 117–119, 145, 154, 197–204
Obsessive-compulsive style, 235–237
Omega sign, 59, 61
Oneiroid states, 121
Ontic aspects of mania, 218
Ontic character of depressive delusions, 183
Ontological anxiety, 192, 193
Ontological dimension of delusions, 135
Open-ended questions, 43, 44
Operational approach, 95
Operational definition, 31, 134, 136, 137, 155, 162
Operational revolution, 1, 29, 31
Opisthotonus, 67, 122
Orbitofrontal cortex injury, 119
Organic anxiety, 117–119
Organic depression, 174
Organic hallucinations, 110
Organic maniform psychosis, 117
Organic mood disorders, 116–117
Organic obsessive-compulsive-like phenomena, 117, 204
Organic personality change, 119–120, 233
Organic psychosis, 110–112, 114, 122, 137
Organic psychosis, paranoid and schizophrenia-like, 113–116
Orientation, 59, 84, 100, 111, 122, 123, 131, 135, 140, 202, 218, 257
Outer, 20–21, 54, 63
Outpost syndrome, 154, 155
Overactivity, 65, 119
Overvalued ideas, 132, 141, 144, 155, 236

P
Pan-anxiety, 192–194
PANDAS, 118
Paradepression, 4, 97, 174–175, 178–181, 223
Paragrammatism, 78, 81, 161
Parakinesia, 60, 62, 65, 66, 68, 69, 138
Parakinesia in the eye muscles, 68
Paralogical associations, 78, 82, 161
Paralogical disorders of thinking, 83
Paralogical omissions, 78, 81
Paralogic condensation, 81
Paramimia, 62, 65, 162
Paranoid fear, 195, 196
Paranoid headlights, 68
Paranoid ideation, 141, 142, 151, 195, 196, 216, 238, 239, 242

Paranoid psychoses, 156, 219
Paranoid squint, 68, 69
Paranoid style, 236
Paraphasia, 75
Parataxis, 217, 218
Parathymia and paramimia, 162
Pareidolia, 146
Parkinson's disease, 60, 115, 117, 119, 143
Pars pro toto, 77, 78, 83
Partial epilepsy, 117, 194
Passive negativism, 63
Passivity continuum, 140, 149
Passivity mood, 140, 145, 149, 192, 193
Passivity phenomena, 57, 61, 105, 134, 136, 140, 145, 193, 199, 204
Pathic aspect of delusions, 135, 183, 193
The pathological suicide, 86
Pattern completion, 18
Pattern recognition, 18, 20, 31, 33, 40, 71, 94
Perception, 18, 21, 71, 96, 105, 132–137, 141, 142, 146–149, 170, 171, 193, 206, 211, 212, 218
Perception in hypomania, 212
Perceptual distortions, 141, 146, 206, 212
Perplexity, 28, 48, 60, 62, 68, 72, 73, 99, 105, 121, 137–139, 152, 162, 173, 179, 195, 197, 224
Perseveration, 62, 64, 66, 77, 78, 81, 83, 111, 161
Person, 21, 28, 40, 41, 45, 47, 53–55, 57, 58, 61, 68, 70, 82, 94, 106, 114, 133, 137–140, 147, 155, 156, 193, 211, 213, 232, 235, 237, 244
Personality, 4, 19, 38, 41, 45, 47, 57, 67, 69, 73, 87, 93–106, 111, 112, 119–120, 140, 142–144, 146, 150–153, 160, 171, 173–176, 180, 182, 192, 196, 200, 211, 216, 219, 220, 222–224, 231–245, 248, 251–253, 257
Personality change, 111, 112, 119–120, 233, 243, 244
Personality change, organic, 119–120
Personality disorder, 4, 19, 38, 73, 94, 101, 104, 105, 142, 143, 146, 150, 151, 153, 160, 174, 180, 182, 196, 219, 224, 231–245, 247–248, 252–253
Personality disorder in adolescence, 248
Personhood, 232
Petites fautes, 173
Pfropfschizophrenie, 115
Phenomenological approach, 2, 23–24, 40, 41
Phenomenology, 23
Phonological paraphasia, 75
Photopsia(s), 115, 146
Pisa syndrome, 67–68
PLEs. *See* Psychotic-like experiences (PLEs)
PNES. *See* Psychogenic non-epileptic seizures (PNES)
Polythetic definitions, 95
Poor autism, 139
Posture, 41, 58, 59, 61, 65, 67
Post-traumatic stress disorder (PTSD), 87, 110, 243
Poverty of speech, 75, 76, 155
Praecox Gefühl, 70, 71, 97
Precipitation of psychosis, 221
Predictive validity, 10, 11
Premonitory sensation, 61, 118
Premorbid traits of bipolar disorder, 232
Premorbid traits of schizophrenia, 232, 244, 251
Presence hallucinations, 143
Present state examination, 37, 136, 257
Pressure of speech, 72, 75, 76, 216
Primary delusional ideas, 134
Principle of charity, 106, 258
Probabilistic diagnosis, 258
Prodromal symptoms of schizophrenia, 155, 159, 248
Pronounced rigid parallelism, 68, 69
Prototype, 2, 18, 19, 94, 99, 102, 105, 131, 175, 241
Prototypical diagnoses, 1
Pseudocompulsion, 3, 66–67, 141, 144
Pseudodelirium, 122
Pseudodementia, 79, 111, 120–122
Pseudodepression, 4, 97, 117, 120, 170, 175, 181
Pseudohallucinations, 160, 239
Pseudo-obsession, 35, 61, 118, 141, 143, 144, 174, 179, 199–202, 235
Pseudo-obsession in depression, 35, 144, 200, 201
Pseudo-open, 69, 70
Pseudopsychopathic schizophrenia, 150, 241
Pseudoschizophrenia, 161, 185
Psychesthetic proportion, 179, 244
Psychiatric assessment, 28, 29, 54
Psychiatric object, 17–19, 31, 54
Psychiatric training, 19, 28
Psychoactive substances, 115
Psychogenic non-epileptic seizures (PNES), 122, 123
Psychogenic psychoses, 179, 222
Psychogenic psychosis, 179
Psychological pillow, 62, 66
Psychomotor excitation, 60, 66
Psychomotor inhibition. *See* Psychomotor retardation

Psychomotor retardation, 58–60, 62, 75, 138, 172, 175, 178, 180, 185
Psychosis, 2–5, 14, 38, 57, 60, 71, 86–88, 98, 101–103, 110–116, 122, 129–162, 181, 182, 193, 196, 204, 205, 209–226, 236, 239, 240, 242, 248, 250, 258
Psycho-social history, 18, 43, 44
Psychotic depression, 97, 170, 181–184, 225
Psychotic-like experiences (PLEs), 156, 158, 224
Psychotic-like phenomena, 103, 104, 159
Psychotic phenomena in the general population, 158–159
PTSD. *See* Post-traumatic stress disorder (PTSD)
Punding, 118

R
Rapid cycling bipolar disorder, 221
Rapport, 2, 3, 19, 28, 36, 40–43, 46, 47, 53, 68–71, 73, 94, 99, 105, 151, 160, 218, 242, 258
Raptus melancholicus, 73
Raving madness, 218
Reactive mood, 175
Reactive psychoses, 179, 222, 223
Reactive psychosis, 179
Reactivity in depression, 180
Reality judgment, 130, 141
Recurrent depression, 184, 220, 251
Relocation depression, 176
Remanence, 176
Retardation, 49, 58–60, 62, 75, 83–85, 87, 115, 121, 138, 157, 172, 173, 175–178, 180, 183, 185, 240, 251
Rhythmic, 68
Rich autism, 139
Rituals, 58, 60, 66, 67, 103, 118, 144, 197, 200, 202, 203
Rumination, 28, 35, 118, 143, 151, 173, 177, 179, 180, 192, 200, 206

S
Schizoaffective disorder, 101, 216, 223–226
Schizoid personality disorder, 234, 235, 245
Schizoid temperament, 244
Schizophrenia
  cross cultural aspects, 154
  early course, 248–251
Schizophrenia *vs.* autism spectrum, 250–251
Schizophrenic autism, 161, 177
Schizophrenic grandiosity, 140
Schizophrenic prodrome, 146, 156
Schizophrenic spectrum, 97, 161
Schizophrenic stupor, 62, 138
Schizophreniform psychosis, 223
Schizotaxia, 150
Schizotypal personality disorder, 38, 142, 143, 146, 150, 151, 161, 234
Schizotypy, 38, 58, 69, 70, 74, 94, 97, 104, 115, 120, 131, 140–142, 144, 149, 150, 153, 156, 158, 161, 172, 182, 185, 195, 196, 202, 224, 231, 234, 235, 244, 248, 250
Schizotypy, compensated and decompensated, 97, 104, 149
Schizphrenia, disorganized subtype, 181
Schnauzkrampf, 62, 65
Scleral flash, 68
Secondary autism, 139, 177, 179, 250
Secondary delusions, 134, 135, 184
The secondary impulsive suicide, 86
Self-disorders, 3, 33, 70, 76, 97, 106, 116, 138–142, 149, 150, 156, 158, 182, 185, 206, 218, 223, 224, 241, 242, 248, 251
Self-harm, 3, 4, 55, 85–87, 239, 240
Self-mutilating behavior, 238, 240
Self-reference, 99, 141–143, 158, 178, 179, 184, 195, 196, 236, 245
Self-reference, primary, 142, 195, 196
Self-reproach, 173, 174, 179, 180, 184, 242
Semi-structured interview, 29, 34–37, 39
Sense of reality, 130, 131, 142, 199
Sensitiver Beziehungswahn, 143
Sensitive reference psychosis, 143, 223
Sensitivity, 11, 12, 38, 39, 177, 179, 182, 242, 257
Sensory overload, 195, 197
Shared/induced psychosis, 133, 223
Shifty glance, 69
Shy, 70, 244
Signs, 1–3, 17, 19–23, 30, 44, 47, 53–87, 94, 95, 98, 99, 101, 109–113, 117, 119, 121, 122, 131, 132, 136–138, 155, 160, 162, 172, 173, 185, 186, 197, 220, 221, 233, 235, 240
Silly mood, 72
Simple schizophrenia, 150, 153, 185, 250
Slater psychosis, 114
Social anxiety, 4, 96, 99, 141, 142, 149–151, 158, 177, 192, 195–198, 250
Social phobia. *See* Social anxiety
Social relations, 101, 250, 257
Social stability, 219, 257
Sociodystonicity, 133
Soft bipolar spectrum, 220, 245
Soft signs of bipolar disorder, 110, 220
Solipsism, 140

Solipsistic grandiosity, 144
Somatic department, 45
Somatic depersonalization, 147, 178, 179
Somatic illness, 19, 45
Soundless voices, 133
Spatialization, 140
Specificity, 11, 12, 38, 39, 98–99, 131, 134, 247, 252
Specificity of psychopathology, 98–99
Spectra. *See* Diagnostic spectra
Staring, 55, 68
Stereotypies, 60–62, 64, 66–68, 111, 138, 191, 202, 204, 218
Steroid psychosis, 117
Stimulus-response paradigm, 31
Structure, 2–4, 17–19, 21, 22, 27–41, 43, 44, 53, 54, 60, 72, 77, 79, 94–99, 101, 102, 110, 114, 130, 134, 136, 138, 140, 147, 149, 162, 175, 192, 193, 197, 201, 215, 217, 218, 225, 233, 234, 237, 238, 257–259
Structured Clinical Interview for DSM, 18, 29, 30, 38
Structured interview, 18, 19, 29, 31–40, 95, 258
Structured psychiatric interview, 27, 29, 34
Stupor, 59, 60, 62, 63, 65, 121, 123, 138, 156, 173, 185
Substance-related psychoses, 226
Subsyndromal depression, 182, 184
Subthreshold depression, 104, 182
Suicidal behavior, 57, 85–87, 180, 238, 242
The suicidal psychotic reaction, 87
The suicidal raptus, 86
Suicidal risk, 48
Symbolism, 77, 78, 81
Symptom-poor schizophrenia, 123, 155, 185, 206, 251
Symptoms, 1–3, 5, 12, 14, 17–22, 28–31, 33, 35, 36, 39, 40, 44, 45, 47, 54, 56, 59, 61–63, 67, 68, 70, 71, 87, 93–96, 98, 99, 101–105, 112–119, 121–123, 130–141, 144, 145, 147, 149, 152–157, 162, 170, 172, 175, 178, 179, 182–185, 191, 194, 195, 199, 200, 202–206, 210–216, 220–225, 232, 235, 238–243, 247–254, 257, 258
Symptoms and signs, 2, 17, 19–21, 23, 30, 44, 53, 54, 63, 94, 98
Syncretism, 78, 83

T
Tactile hallucination, 116
Tangentiality, 77, 78, 79
Tardive dyskinesia, 67, 68
Temperaments, 213, 219, 220, 232, 241, 244–245, 251
Temporal lobe epilepsy, 114, 117, 120
Tension madness, 62
Theoretical rationality, 121, 130, 141
Theory of mind, 157, 158
Third-person data, 21
Third person perspective, 20, 30
Thought block, 75–77, 79, 137
Thought broadcast, 136, 145, 149, 196
Thought disorder, 3, 43, 54, 65, 66, 70, 74, 76–84, 94, 115, 116, 122, 130, 138, 151, 153, 157, 158, 160–162, 218, 225, 241, 242
Thought distortion, 79, 161
Thought echo, 132, 136, 137
Thought interference, 203
Thyroid disease, 117
Tics, 59, 61, 64, 118, 204, 252
Time experience, 176
Tobsucht, 218
Tourette's syndrome, 58, 64, 118, 252
Trait and state, 94
Transitional sequences, 149
Transition to psychosis, 147–149, 156
Transitivism, 136, 140, 145, 195, 197, 213, 232, 241
Transitivistic anxiety, 68, 195, 196
Trema, 147, 193
Trouble générateur, 96
Truman show syndrome, 143
Typification, 18–19
Typus melancholicus, 176, 200, 219, 233, 245, 251

U
Ultra-rapid cycling bipolar disorder, 221
Unanchored glance, 69
Unitary psychosis, 102
Unsinnige Handlung, 56, 145
Untergrunddepression, 175
Un-understandable delusion, 148
Urstein psychosis, 226
US-UK diagnostic project, 29
Utility, 99, 194

V
Vagueness, 77–79, 83, 99, 161
Valid classification, 11
Ventromedial prefrontal cortex injury, 119
Veraguth's sign, 59, 61
Verbigeration, 62, 64, 81

Vital depression, 72
Voice hearing, 103, 159, 239
Voices coming from the body, 132
Vorbeireden, 77, 79, 121
Voyage pathologique, 56

W
Waxy flexibility, 65, 138
Wearing sunglasses, 68, 69, 196
Withdrawal psychosis, 116
Withdrawn, 18, 46, 70, 139, 248

Z
Zerfahrenheit, 77–80, 161, 162, 217